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ABSTRACT

This is an evaluation of the Chicago, Illinois public schools' bilingual program during fiscal year 1979. The report states that bilingual instruction was offered in sixteen languages in more than two hundred programs ranging from pre-kindergarten to high school. Descriptions of both the elementary and high school language programs provide information on program structure, staff and student characteristics, and student development within the program as indicated by increased English instruction. Performance on standardized tests measuring mathematics and reading ability show student progress in the elementary grades. Grade point averages are used to demonstrate program effects on high school student achievement. Results from classroom observation and teacher surveys are also presented. Significant findings offered by the evaluation include documented student achievement gains in English reading and mathematics and evidence that students are being moved into a regular English curriculum within three years. Appended to the report are a sample bilingual student form, a student census form, a classroom observation form, and a teacher questionnaire form. Also included are sample Spanish criterion-referenced tests in mathematics and an explanation of short tests of linguistic skills and their calibration. (APM)

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Chicago's Bilingual Education Program

Evaluation Report

Fiscal 1979

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Introduction

In 1969 the Chicago Board of Education initiated six Spanish bilingual programs for students whose limited English proficiency prevented meaningful participation in the regular English curriculum.[1] Each year thereafter bilingual services were expanded to accommodate the ever increasing number of students of limited English proficiency from diverse language and cultural backgrounds. Since 1976 the overwhelming majority of limited English proficiency students enrolled in the Chicago public schools have received bilingual services.[2] During Fiscal 1979 bilingual instruction was provided in 16 languages in more than 200 programs ranging from prekindergarten through high school.

Bilingual program participants represented approximately 7 percent of the elementary enrollment in the Chicago public schools in Fiscal 1979. Despite substantial reductions in the total public school enrollment in Chicago during the last decade, Hispanic and other ethnic minorities have shown marked increases. Increases in the number of limited English proficiency students eligible for bilingual services point to the need for expanded services as well as the heightened importance these services assume in the task of educating a significant portion of the school age population in Chicago.

This report shows that FY1979 bilingual program participants demonstrated significant gains in English reading and mathematics, a pattern which has been documented over a period of years.[3] It also concludes that students are being moved into the regular English curriculum within a period of three years, a fact substantiated by the low incidence of fourth and fifth-year program enrollments during the last five years.[4] Large variations in achievement among pupils were found, suggesting that a variety of factors play an important role in the academic achievement of bilingual program participants. Variations in program implementation, a factor which has been cited in numerous evaluation studies of multi-site educational programs, may contribute significantly to the differences among students. The interaction of educational treatment and child input factors must be examined in order to understand achievement differences among limited English proficiency students, as Cummins writes:

> "The lack of concern for the developmental interrelationships between language and thought in the bilingual child is one of the

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[1]Funding for these programs was provided by ESEA Title VII.

[2]Article 14C of the Illinois Revised Statutes, Chapter 122 mandated transitional bilingual education for limited English proficiency students effective July 1, 1976.

[3]Final Evaluation Report State-Funded Bilingual Education Program, Fiscal 1974. Department of Government Funded Programs, Board of Education, City of Chicago; Chicago's Bilingual Program Evaluation Report 1975-76. Department of Research and Evaluation, City of Chicago.

[4]Ibid.

major reasons why evaluations and research have provided so little data on the dynamics of the bilingual child's interaction with his education environment."[5]

A noteworthy finding of the report is the lack of significant differences in English achievement gains attributable to the amount of time limited English proficiency students spend in an English classroom. This points to the need for a more in-depth analysis of the relationship between instructional program types, child input factors, and achievement. It also underscores the necessity of broadening the measures of program effectiveness to include both native language and English achievement.

Long-term studies of bilingual instruction in other parts of the country suggest that bilingual instruction may have a cummlative effect with results that may not show up in short-term, one-year-at-a-time evaluations.[6] The transitional study initiated in 1978 partially recognized this need, but in the future, outcome measures must be linked to a thorough documentation of process variables.

Today, bilingual services for limited English proficiency students are generally a reality. The impetus for future evaluations must be to isolate and understand the strategies for producing better programs for students with varying needs.

[5]James Cummins. "Linguistic Interdependence and the Educational Development of Bilingual Children" Review of Educational Research, Spring 1979, Vol. 49, No. 2, p. 227.

[6]Alan Pifer. "Bilingual Education and the Hispanic Challenge" Annual Report Carnegie Corporation of New York, 1979, pg. 12.

Summary of Findings

- Eighty-seven percent of all students receiving bilingual services were at the elementary level, 13 percent at the secondary level. Of the elementary level students, 60 percent were in the primary cycle ages 4-8.

- Students most needing bilingual instruction were its primary recipients: 59 percent of all elementary level participants had little or only partial fluency in English; 25 percent had barely adequate levels of English fluency. It can be concluded from these data that the majority of students receiving bilingual services had only marginal fluency in English, a condition which would have prevented meaningful participation in the regular English curriculum.

- Students receiving bilingual services at the high school level tended to be "new arrivals" to the Chicago public schools as evidenced by the overwhelming number born outside the continental U.S., the low English proficiency levels, and the high concentration of students in the first and second years of bilingual instruction.

- There was a substantial influx of new students into bilingual and English as a Second Language programs. The number of participants reported increased 17 percent in the first five months of calendar year 1979. Seventy percent of the increase was in the first year enrollment.

- More than half of all students participating in bilingual programs were in their first year; 32 percent were in their second year; 14 percent were in their third year. Only 3.5 percent had been enrolled for four or five years. The sharp decline in the number of students receiving services subsequent to the third year indicates that students are moving into the regular English program.

- Sixty-six percent of the elementary level students receiving bilingual services progressed to a higher English instructional category during the 1978-79 academic year. The greatest gains were experienced by those students with the lowest English proficiency.

- Sixty percent of the Elementary level students receiving bilingual services received 50 percent or more of their instruction in English. The percent of English instruction was substantially higher for high school students.

- As a student's English fluency increased, so did the amount of instruction in English which he/she received.

- Students receiving bilingual services gained on the average 7.4 months in Reading Comprehension and 8 months in math as measured by the appropriate subtests of the ITBS.

AVERAGE ITBS GAINS (FY1979)

	READING GAINS (MONTHS)	MATH GAINS (MONTHS)
BILINGUAL	7.4	8.0
TITLE I	7.4	7.3
CITY-WIDE	8.1	8.3

- Bilingual program participants demonstrated gains of 7.5 months in Reading and 9.7 months in Mathematics as measured by the Continuous Progress/Mastery Learning (CP/ML) levels.

- The amount of gain in either Reading or Math (ITBS) appears to be only marginally related to instructional time in English. Less than two percent of the difference in reading gain of a sample of students could be accounted for by an increase in instructional time in English.

Definitions

- English proficiency levels

  I. Students whose English language proficiency is no more than marginal, i.e., the student understands very little and produces only isolated words or phrases in English.

  II. Student whose English language proficiency is no more than partial, i.e., the student understands a little more than a student classified as Level I and can communicate in English with great difficulty.

  III. Students whose English language proficiency is greater than students classified in Level II, i.e., the student comprehends most of what is said to him/her and communicates fairly well although his/her fluency is not comparable to that of Level IV students.

  IV. Students whose English language proficiency is adequate, i.e., greater than students classified in Level III. The students comprehend and communicate adequately but their fluency is not comparable to that of native English-speaking peers.

  V. Students whose English language proficiency is equivalent to that of their native English-speaking peers.

- Instructional Needs Categories*

  Category A: Speaks and understands little or no English and needs almost all instruction in her/his home language.

  Category B: Speaks and understands some English, but needs about half his/her instruction in the home langauge.

  Category C: Speaks and understands well enough to participate in a classroom in which English is used most of the time; receives almost all her/his instruction in English.

  Category NP: This pupil's language ability is equivalent to that of her/his native English peers and she/he can perform adequately in an all English classroom.

- Bilingual endorsement is granted to candidates who hold teacher certificates and who have passed both oral and written examinations in a language in addition to English.

*(See pg. 28 for definition of Category Exit Criteria)

Description of Bilingual Services

During Fiscal 1979 more than 25,500 students received bilingual services in Chicago. The 201 bilingual programs (those serving more than 20 students) were located in all but six of the 27 districts throughout the city with districts 6 and 19 having the largest concentration of bilingual programs. A total of 2350 students were identified as in need of bilingual services for which staff were unavailable. Approximately half of these students were in schools where there were less than 20 students of the same language group. The remaining half, all of which were Spanish speakers, did qualify for bilingual services on the basis of the number of limited English speakers per school. An examination of the instructional needs categories of those students revealed that the majority were judged by their teachers as needing only limited support services in their native language. Thus, it seems that those students in most need are receiving bilingual services, but that support services for students who have achieved some degree of fluency are sometimes curtailed due to the unavailability of qualified staff.

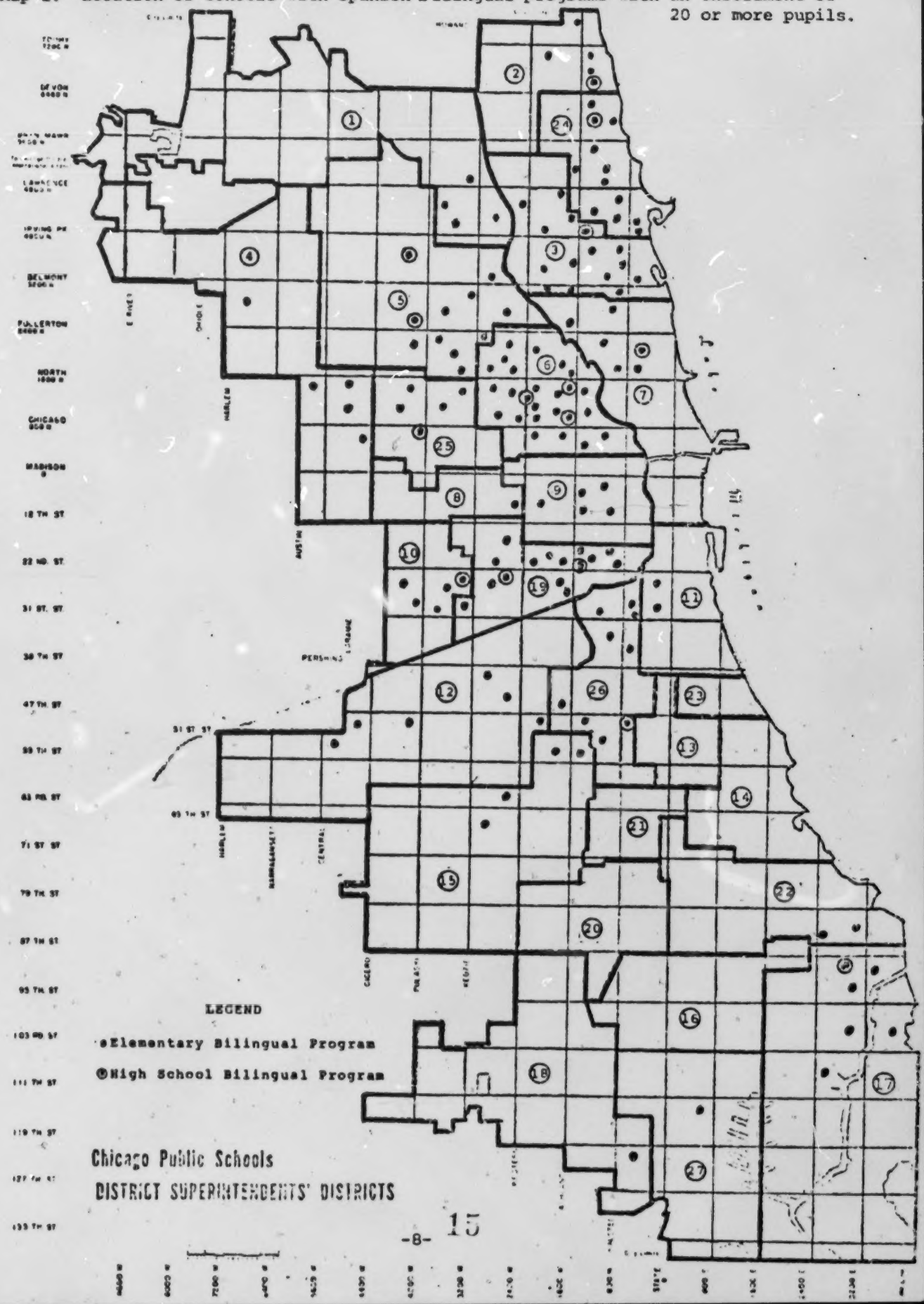
Instruction in 16 languages was provided by approximately 1133 teachers of whom 85 percent were bilingually endorsed; an additional three percent were pending endorsement. There were an additional 41 teacher positions serving the programs with less than 20 students from one language group.

Spanish was the language of instruction for ninety percent of the students participating in bilingual programs. Instruction was also provided in Arabic, Assyrian, Cantonese, Chinese, French, Greek, Indic, Italian, Korean, Laotian, Pilipino, Polish, Romanian, and Vietnamese. Table 1 provides a summary of bilingual programs and staff positions in each district for fiscal 1979. Maps 1 and 2 plot the location of Spanish and non-Spanish (more than 20 students) bilingual programs geographically. Bilingual programs in languages other than Spanish occurred mostly in the northern sections of the city, an ethnically heterogeneous area. Several new programs were established in both the northwest and southwest regions. Spanish bilingual programs were concentrated in the near south and northwest areas and extended north along the lake. Districts 17 and 22 of the city's southeast side also had a number of bilingual programs.

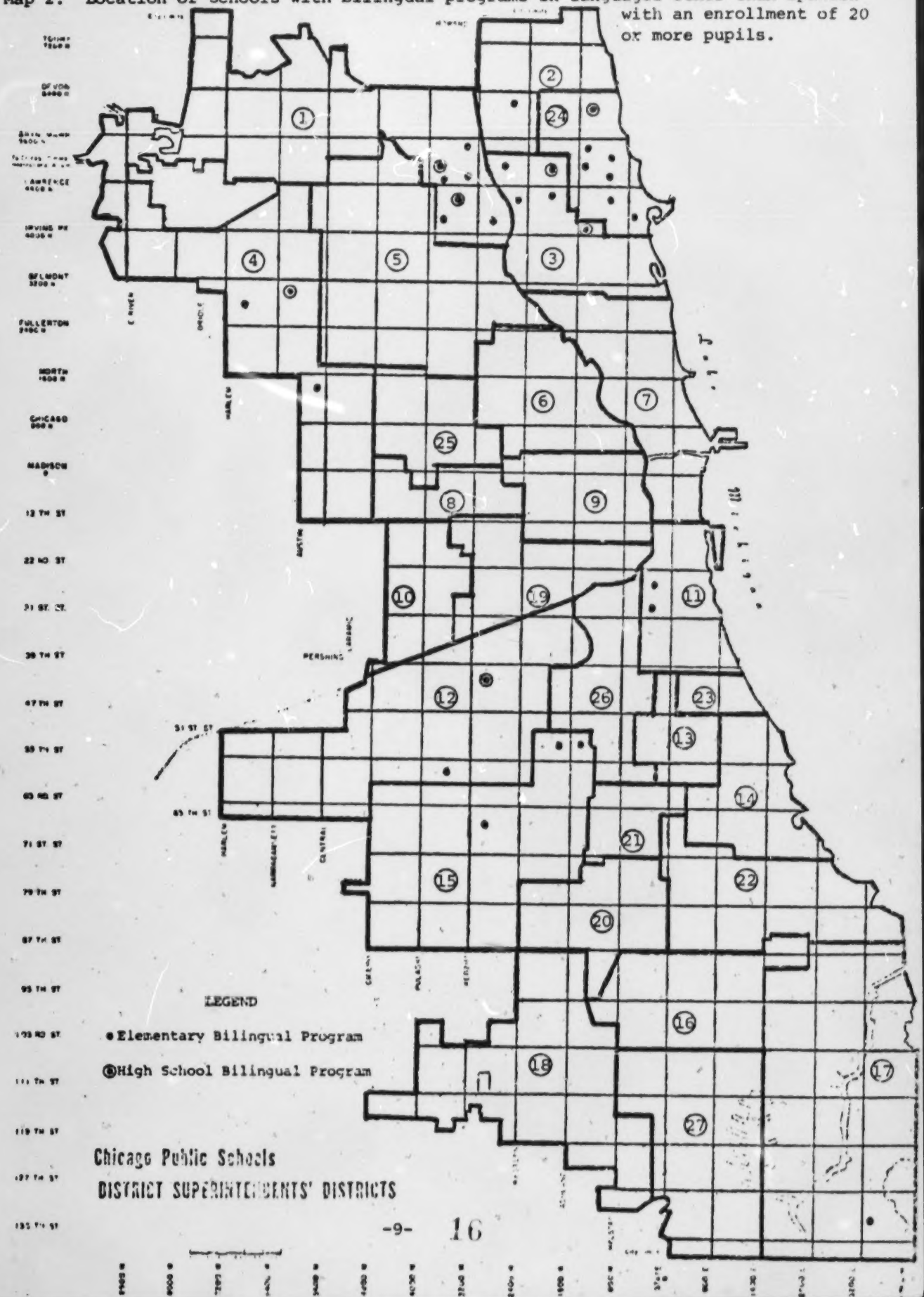
TABLE 1 - Bilingual Programs and Staff by District

District	Number of Schools	Number of Languages	Number of Programs (more than 20)	(Budgeted) Teacher Positions
1	8	6	18	35
2	7	3	7	24.5
3	17	4	22	84
4	6	3	8	18
5	11	2	12	86
6	28	1	28	321
7	6	1	6	17
8	1	1	1	3
9	4	1	4	12
10	6	1	6	65
11	2	2	3	8
12	7	3	7	12
15	4	2	7	21
17	7	3	8	55
18	1	1	1	1
19	18	1	18	200
22	2	1	2	13
24	13	9	28	74
25	6	1	6	58
26	9	1	8	50
27	1	1	1	2
Total	164		201	1159.5

Map 1. Location of schools with Spanish bilingual programs with an enrollment of 20 or more pupils.

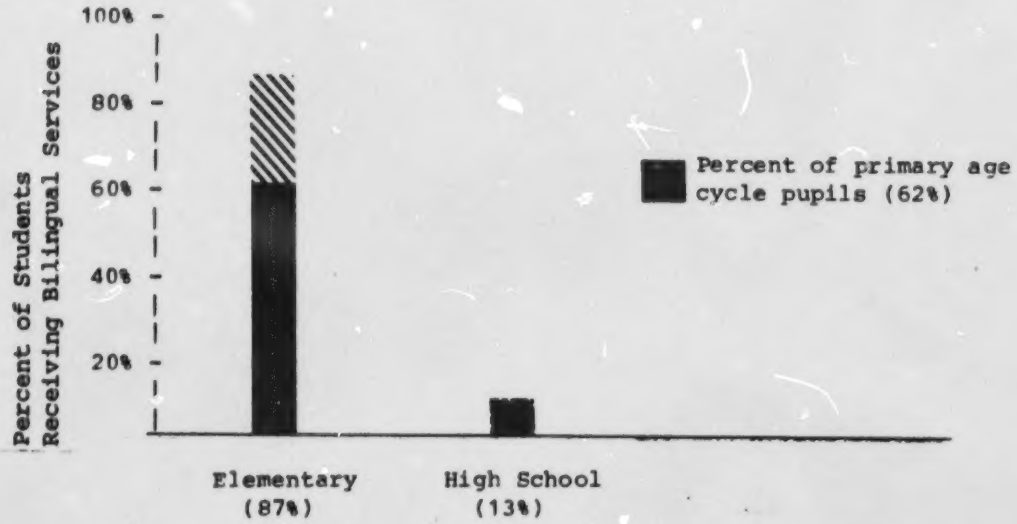


Map 2. Location of schools with bilingual programs in languages other than Spanish with an enrollment of 20 or more pupils.



The majority of students receiving bilingual services were at the elementary level; only 13 percent were at the secondary level. More than 60 percent of all elementary students receiving bilingual services were in the primary cycle, ages 4-8.

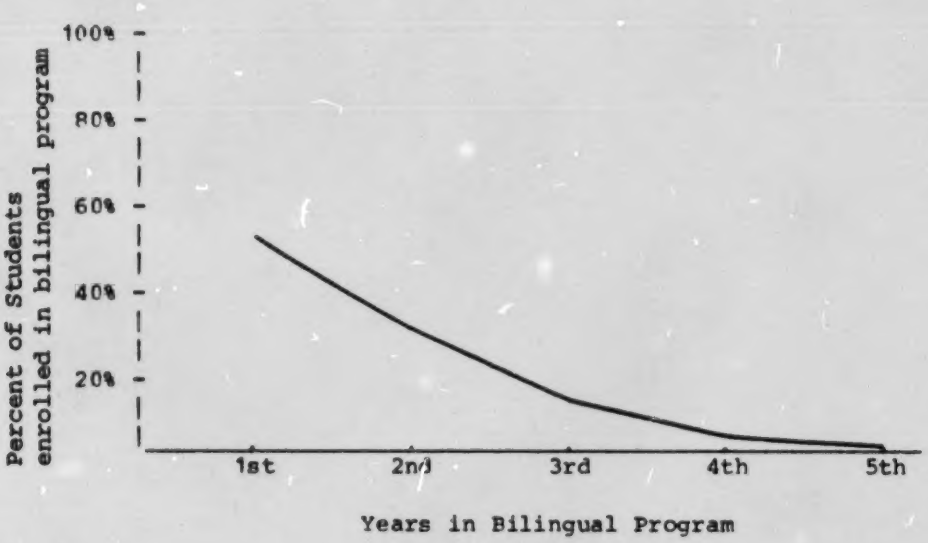
FIGURE 1. Proportion of Students at Elementary and Secondary Levels Receiving Bilingual Services



Between January and May of 1979 the number of students receiving either bilingual or ESL services increased by 17 percent. Students participating in bilingual programs for the first time accounted for nearly 70 percent of the increase. Second and third-year enrollments also increased by 13 percent and 18 percent respectively. Fourth-year enrollment increased by one percent, while fifth-year enrollment decreased two percent. Assuming the continuity of intra-year student identification procedures, the net increase of more than 1800 first-year students in a five-month period suggests a substantial influx of limited English speaking students from outside the Chicago public school system. This conclusion is further substantiated by looking at the enrollment dates of bilingual program participants. Approximately three-quarters of the students began in September 1978. Each month there after between 400-1200 new students enrolled in bilingual programs. At the same time, a substantial number of bilingual program participants left the Chicago public schools. The data indicate a steady influx of new students as well as a moderately high degree of mobility among program participants. The impact of both of these trends on program continuity needs to be examined.

*Article VIII, Section 8.01 of the Illinois Rules and Regulations for Transitional Bilingual Education, State Board of Education, July, 1976, stipulates that a student of limited English-speaking fluency shall remain in the program for a period of three years or until such time as he/she achieves a level of English language skills which will enable him/her to perform successfully in classes in which instruction is given only in English, whichever shall first occur.

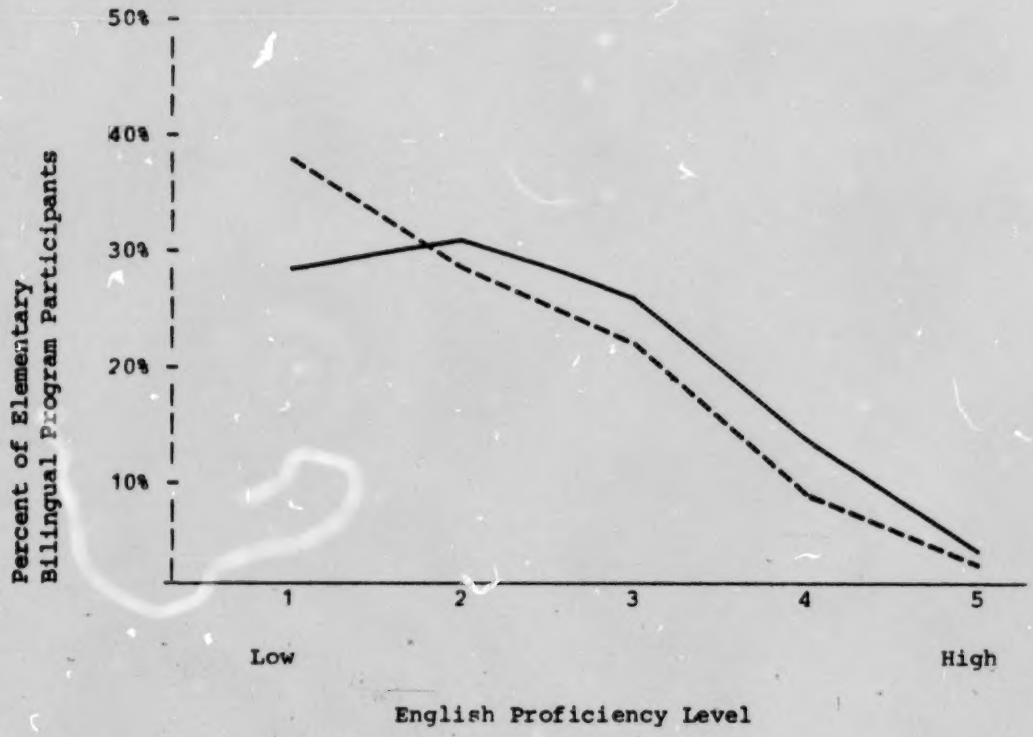
FIGURE 2. Proportion of Students in Bilingual Programs by Number of Years Enrolled



In May 1979, 26 percent of all students surveyed were judged to be in category A as compared to 36 percent in the preceding January. The number of category B students increased though the percent decreased slightly from 30 percent to 28 percent. Category C students increased from 22 percent to 24 percent. The number of students judged not to be in need of services more than doubled.

A similar pattern emerged from language proficiency evaluation of elementary students enrolled in bilingual programs. In January 38 percent of the students were rated at the lowest level of English proficiency as compared to 28 percent at the lowest level in May. The number of students rated at the lowest English proficiency level decreased 17 percent despite a 19 percent increase in first-year students. The number of students rated at levels 2-5 increased though the relative percentage increased only slightly.

FIGUPE 3. Comparison of January and May English Proficiency Levels of Elementary Bilingual Program Participants



The data indicate that the students most needing bilingual instruction were its primary recipients. Fifty-nine percent of all elementary students enrolled in bilingual programs had little or only partial fluency in English (levels 1 and 2 of a five-point scale), 25 percent had barely adequate levels of English fluency; an additional 13 percent could communicate fairly well in English, though their fluency was not comparable to their native English-speaking peers. Only three percent were judged to be totally proficient in English. The fact that 82 percent of those rated as level 1 and 49 percent of those rated as level 2 were in their first year of bilingual instruction suggests that the majority of students in the lowest English proficiency levels were new arrivals to the Chicago public schools and/or were entering school for the first time. The latter conclusion is further substantiated by the fact that more than half of all the elementary students rated at the lowest English proficiency levels and in their first year of bilingual instruction were four five, or six years of age.

Elementary Program Description

Article 14C of the Illinois Revised Statutes, Chapter 122, provides for bilingual instruction for limited-English-proficiency students in content areas as well as the home language, history and culture. In the city of Chicago there was a broad range of bilingual programs designed to meet the needs of limited-English-proficiency students from diverse language and cultural backgrounds. Programs varied widely in organizational and staffing patterns, instructional approaches and materials. Within broad guidelines, most of these factors were at the discretion of local or district authorities. Three organizational models and multiple combinations were used at the elementary level. The Self-Contained model accounted for the largest number of students. In this model a bilingual teacher was responsible for both the English and native language subject areas. A second model, Team-Teaching, required a bilingual and the regular classroom teacher to work together in the same classroom for either a half day or for the entire day. Students in the Pull-Out model received 90 minutes of instruction in the home language from a bilingual teacher and spent the rest of the school day in their assigned classrooms with an English dominant teacher. A fourth model, Departmentalized, was used in high school programs and in some upper grade centers. In this model pupils received instruction from a bilingual teacher in specific subject areas to include mathematics, science, social studies/culture and language arts in the pupil's first language.

Another area which accounted for a significant amount of the variation was the instructional approach employed. Three basic approaches were identified: 1) oral and reading skills in the home language were developed as a basis for acquiring English 2) the home language was used for explanative purposes but literacy was developed or continued exclusively in English. 3) literacy was developed concurrently in both the home language and English.

Profiles of bilingual programs in selected schools indicate considerable variations in key areas (Table 2). There were significant differences in the proportion of students from different instructional needs categories or English fluency levels as well as the total number of students receiving bilingual instruction in each school. The differences extended from schools having relatively few limited English students spread out over the full range of age cycles to schools where the bilingual program was almost exclusively concentrated in the primary grades. Acknowledging the limitations of cross-sectional data, the profiles also suggest considerable variation in the amount of time a student may spend in a bilingual program. In some schools the majority of students were in their first year of bilingual instruction with only a very reduced percentage in the second or third years. Other schools seem to have had mostly two-year programs. Still others appeared to have a consistent enrollment over the three years.

TABLE 2. Sample School Profiles on Selected Variables

A. Instructional Needs Categories

School	A	B	C	NP
A	10%	28%	56%	6%
B	10%	34%	28%	28%
C	18%	27%	25%	30%
D	28%	32%	19%	21%
E	34%	29%	9%	28%

B. Age

School	5-7	8-10	11-13	14-16
A	50%	31%	17%	2%
B	48%	31%	18%	3%
C	-	50%	40%	10%
D	58%	35%	7%	-
E	41%	33%	22%	4%

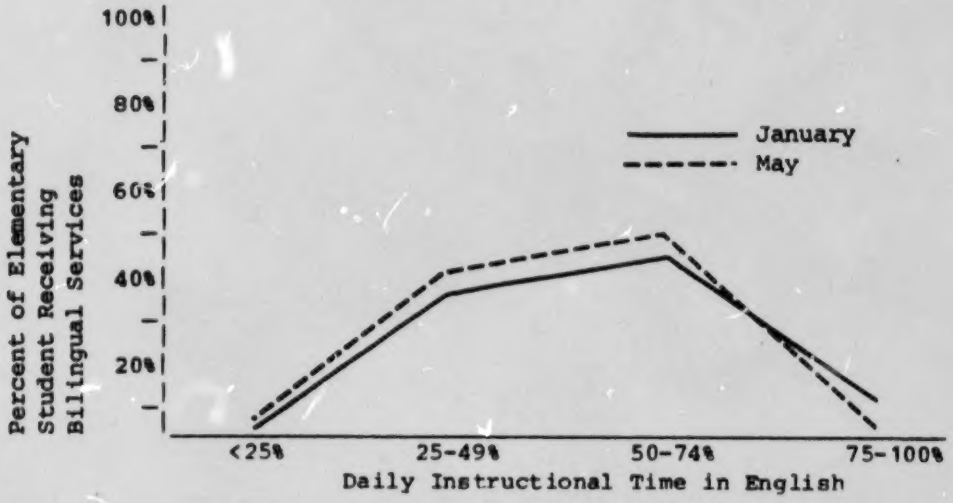
C. Years in Program

School	1st	2nd	3rd	4th	5th
A	71%	12%	14%	2%	1%
B	48%	46%	6%	0	0
C	35%	34%	25%	3%	3%
D	39%	38%	21%	1%	1%
E	44%	32%	22%	1%	1%

The range of objectives, the implicit time frames of specific instructional strategies, and population differences are sufficient to make generalizations concerning bilingual education very difficult. The impact of program variation on student progress, in particular the relationship of specific instructional program variables to outcomes measures, is an area which demands further investigation.

Despite the limitations of the data created by program variations, a general description of the instructional program in terms of the amount of time in English is possible. In May 1979, 60 percent of the students receiving bilingual services received 50 percent or more of their instruction in English. This represents an increase from January, 1979.

FIGURE 4. Daily Instructional Time in English



The increase appears to have occured equally in all subject areas. Language arts was more likely to be given in English than other content areas. Science and social studies were least likely to be given in English, though the differences were minimal.

FIGURE 5. Percent of English Instruction for Language Arts

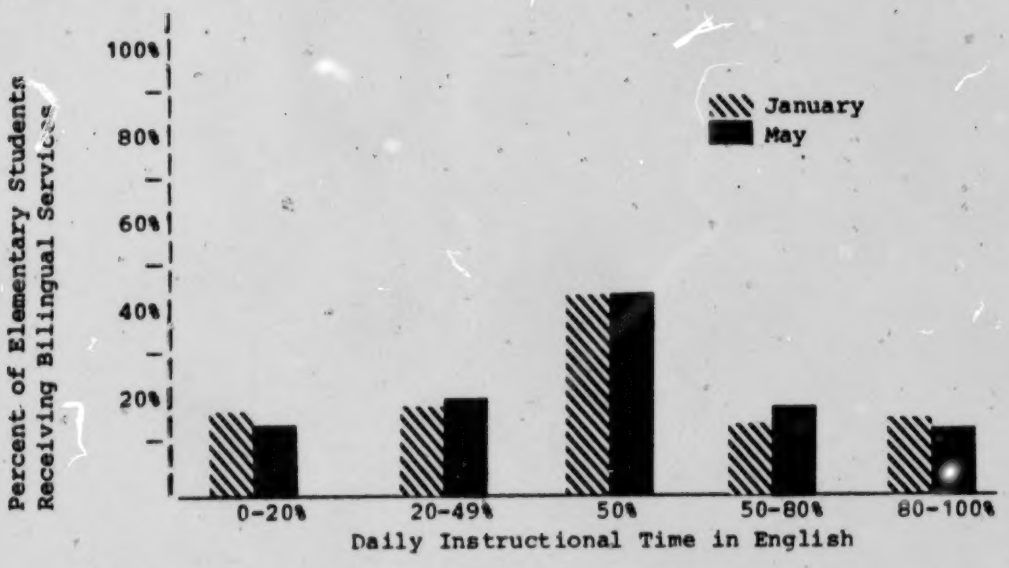


FIGURE 6. Percent of English Instruction for Mathematics

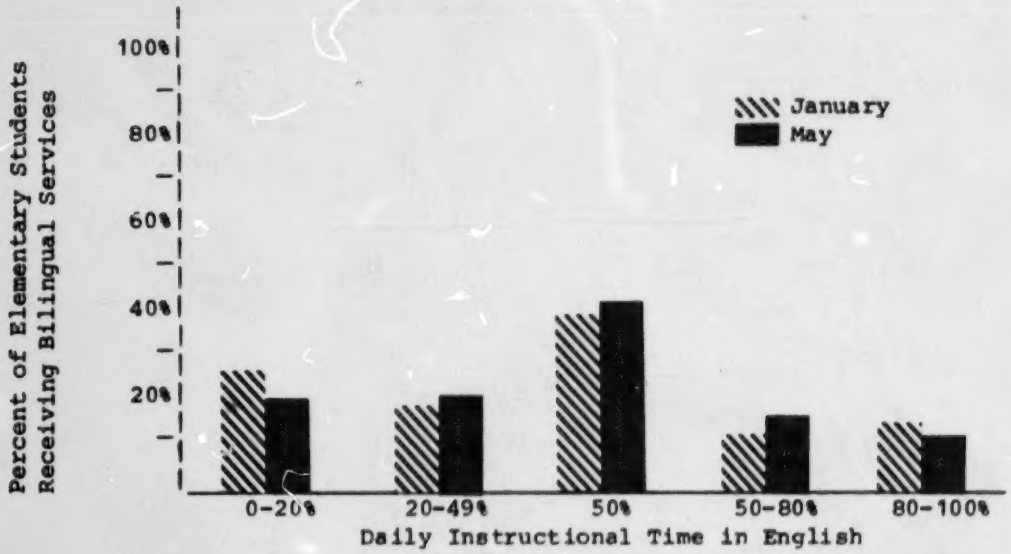
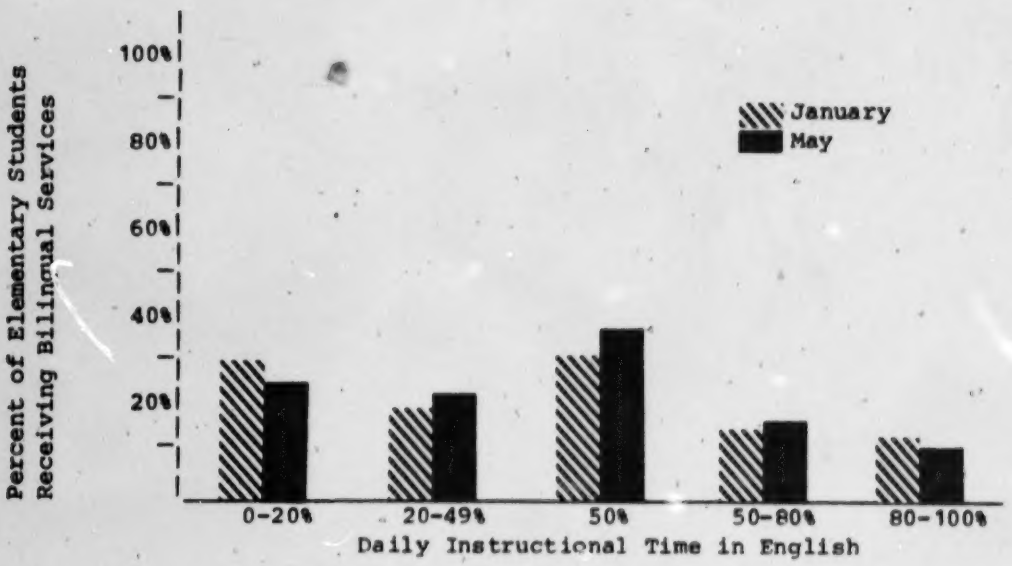


FIGURE 7. Percent of English Instruction for Social Studies and Science



It was expected that those students with the least fluency in English would receive a greater portion of their instruction in their native language. This expectation was generally confirmed (Figure 8). Seven percent of the Category A students enrolled in bilingual programs as compared to 1 percent of Category B and C students received 25 percent or less of their instruction in English. Sixty-six percent of the Category A students as compared to 33 percent of the Category B students and eight percent of the Category C students received between one-quarter and one-half of their instruction in English. Over half of the Category B students and two-thirds of the Category C students received 50 to 75 percent of their instruction in English. One-quarter of the C students received between 75 percent to 100 percent of their instruction in English in contrast to nine percent of the category B students.

FIGURE 8. Instructional Needs Category by Amount of English Instruction

The percent of English instruction per day increased slightly with the number of years enrolled in the bilingual program. It is likely that the increase is small due to the movement of students who have been proficient in English into all English classrooms. This appears to be supported by the sharp decline in the number of students enrolled in bilingual programs subsequent to the first year.

FIGURE 9. Mean Instructional Time in English by Years Enrolled in Bilingual Program

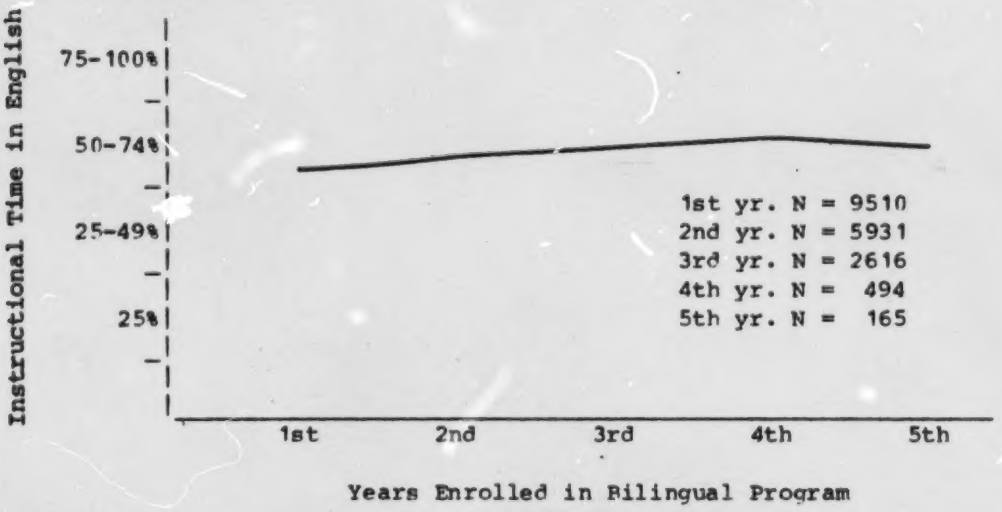


FIGURE 10. Years in Bilingual Program by Instructional Time in English

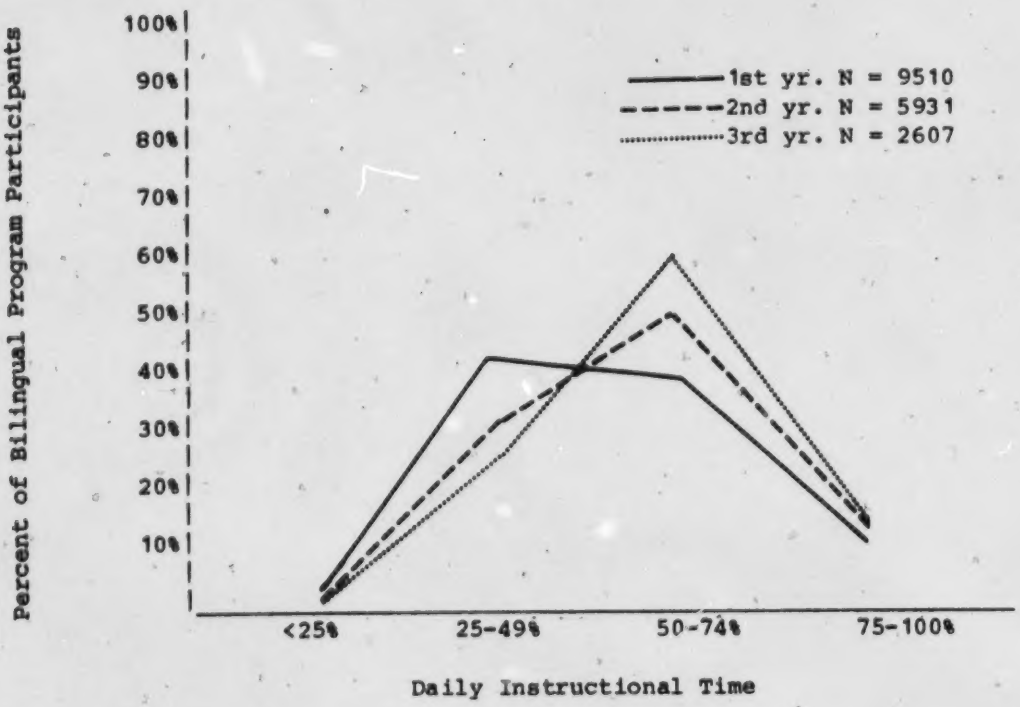


Figure 10 indicates that the number of students receiving less than one-quarter of their instruction in English represented only three percent of the students enrolled in bilingual programs. First-year students are more likely to receive between 25 and 49 percent of their instruction in English than second and third-year students. The trend is reversed for those students receiving 50-75 percent English instruction. Nearly one-quarter of the third-year students received 25-50 percent English instruction. More than half of these students were between the ages of 6 and 8 when more instructional time in the native language may be required. It appears that English language fluency is a more accurate predictor of the amount of instructional time in English than the number of years of bilingual instruction, though there is a moderate degree of correlation between years in program and English fluency.

In addition to state-funded bilingual services, approximately 10 percent of the students received supplemental tutorial services from Title VII support teams. Eight percent of the students were also served by teachers who had participated in Title VII sponsored staff development programs under the auspices of the Chicago Board of Education and/or cooperating universities. Eight percent of the students participated in Language in Transition (LIT) , a Title I funded activity designed to increase the English language skills of students of limited English proficiency. An additional four percent participated in other Title I activities. Special reading services, the Intensive Reading Improvement Programs (IRIP) were provided also for approximately five percent of the students identified as being of limited English fluency.

Student Achievement

This section examines the achievement of elementary students receiving bilingual services. Ideally, the measurement of the academic achievement of limited English proficiency students should include both English and native language measures. A significant portion of the curriculum, particularly for students at the lower English proficiency levels, is likely to be given in the native language. Testing solely in English may severely underestimate program effectiveness, ignoring areas of the bilingual students' knowledge--areas which may be inadequately mirrored through English instruments.

Acknowledging the above limitations, two measures of English achievement were used. These included the Iowa Tests of Basic Skills (ITBS), administered annually to students enrolled in Chicago public elementary schools, and the Continuous Progress/Mastery Learning (CP/ML) reading and math levels. ITBS scores are reported for only a limited number of students receiving bilingual services. CP/ML levels, however, were available for the majority of students and are known to correlate reasonably well with the ITBS scores in reading (+.67) and mathematics (+.71).

Of particular interest, in light of the compensatory character of bilingual services, was the amount of gain students at different age and fluency levels demonstrated. In addition, the relationship of instructional time in English to gains in reading and mathematics was examined.

Figures 11 and 12 depict the mean ITBS reading and mathematics grade equivalent scores for students receiving bilingual services. Differences in English proficiency, reflected in the assignment of instructional categories, appear to be operant for both reading and mathematics achievement. In general, students receiving bilingual services performed better in mathematics than in reading; the differences in mathematics achievement among the instructional categories appear to be less pronounced than for reading.

FIGURE 11. Mean ITBS Reading Comprehension Scores by Age and by Instructional Category

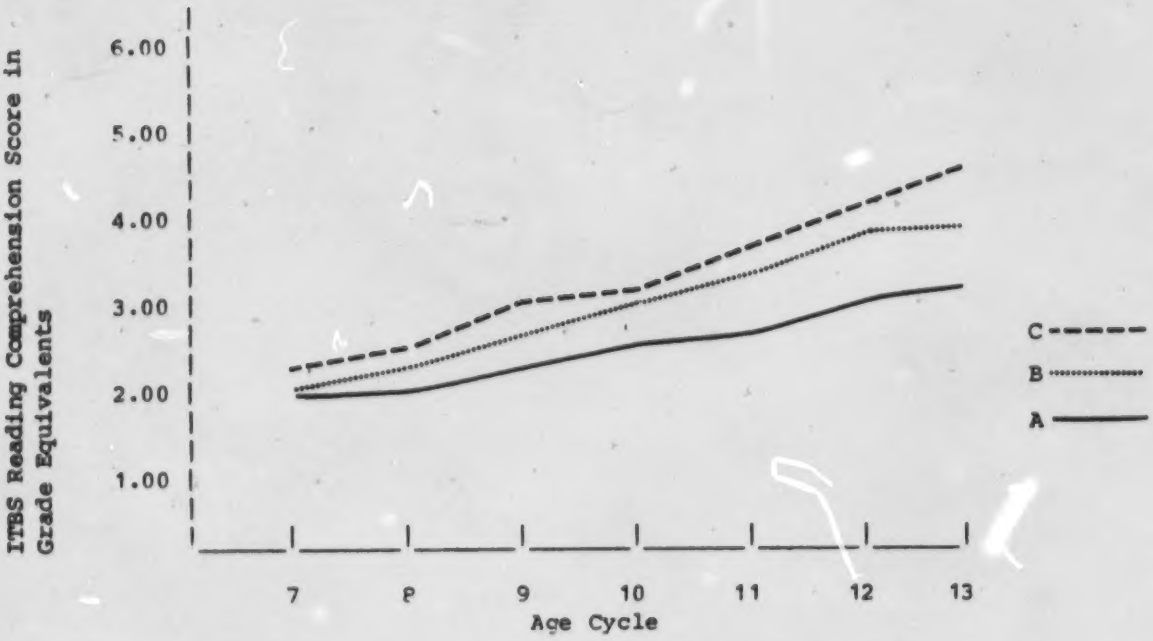
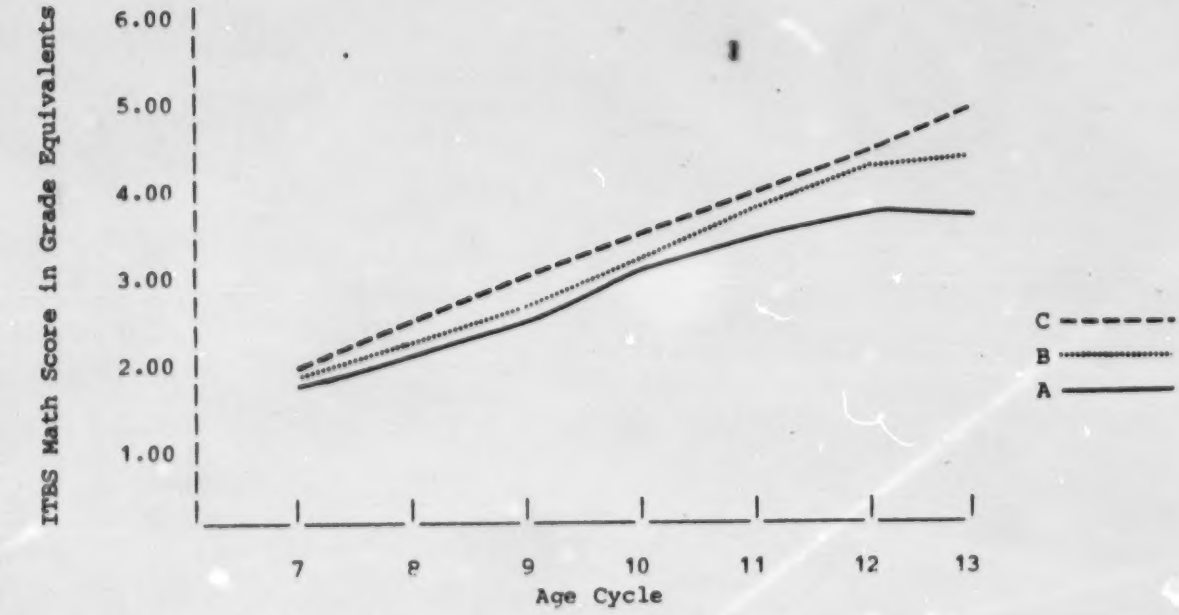


FIGURE 12. Mean ITBS Mathematics Scores by Age and by Instructional Category



The academic progress of nearly all bilingual program participants in English reading and math was assessed by a series of locally developed criterion-referenced tests. Figures 13 and 14 show the mean performance of these students by age and instructional category. Comparison of the two figures reveals the effect English fluency had on achievement in both areas. In reading, the distinctions among instructional categories were significant and increased with age; in contrast, the category distinctions for math while operant were minimal.

Examination of the preceeding figures reveals that students receiving bilingual services achieve, in general, several years below expected grade level in reading and math. The transitional nature of the bilingual program is a factor contributing to this phenomenon. As students become able to function in all English classrooms they no longer receive bilingual services. Once students function at or near grade level they usually do not participate in state-funded bilingual programs.

Gain scores are more useful for the purpose of program evaluation. Students receiving bilingual services gained on the average 7.4 months in reading and 8.0 months in math on the appropriate subtests of the ITBS. The reading and math gains followed a pattern similiar to the grade equivalent distributions. Overall, students gained slightly more in math than in reading. This was particularly true for students 10 years of age and older. Category B students showed the most gain in both areas (Table 3). Figures 15 and 16 depict the average reading and math grade-equivalent-month gains of students receiving bilingual services in comparison to Title I and city-wide averages. As compensatory education programs, Title I programs provide the closest, though distinct, comparison population by which to gauge the effectiveness of bilingual or ESL programs.

TABLE 3. ITBS Reading and Math Gains (months) by Age and Instructional Category

	Reading			Mathematics			Reading Total	Math Total
Age	A	B	C	A	B	C		
8	7.0	8.3	6.0	7.4	6.8	6.3	7.2	6.9
9	6.9	7.6	7.2	6.8	7.1	7.7	7.2	7.1
10	6.9	6.9	6.8	9.1	9.1	8.1	6.9	8.9
11	7.3	7.3	9.2	5.7	8.5	7.1	8.0	8.1
12	7.3	8.3	7.3	7.3	9.4	9.7	7.7	9.3
13	7.1	7.1	9.5	10.0	8.8	11.3	8.4	10.2
Overall Average Gains (months)	7.1	8.1	6.8	8.1	8.4	7.5	7.4	8.0

FIGURE 13. CP/ML Levels in Reading by Age and Instructional Category

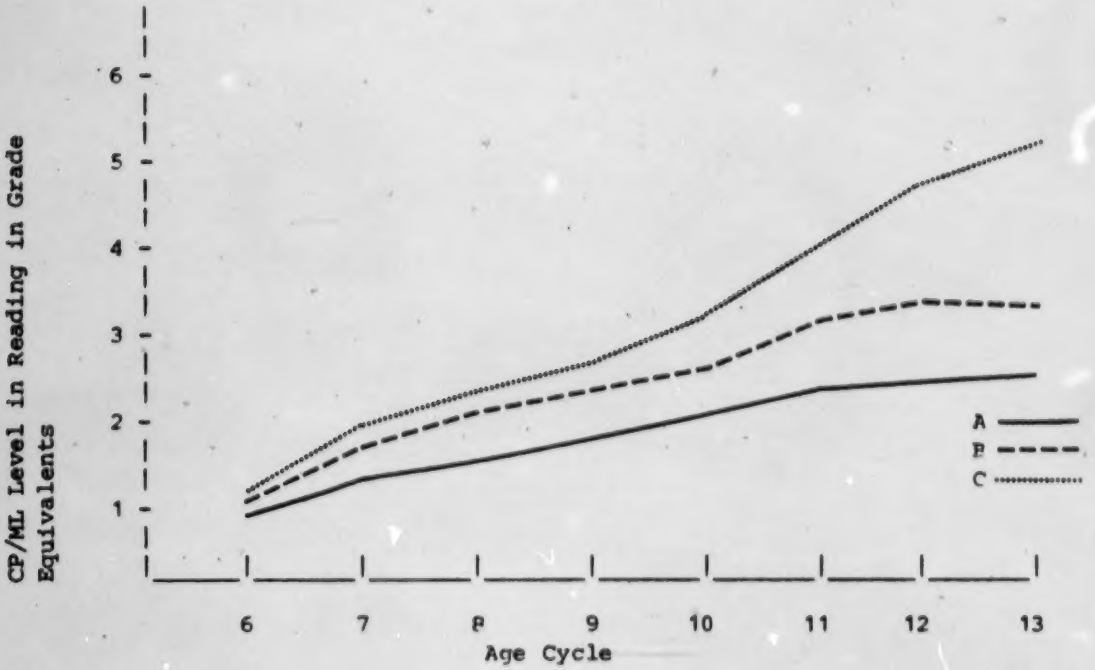


FIGURE 14. Mean CP/ML Levels in Mathematics by Age and Instructional Category

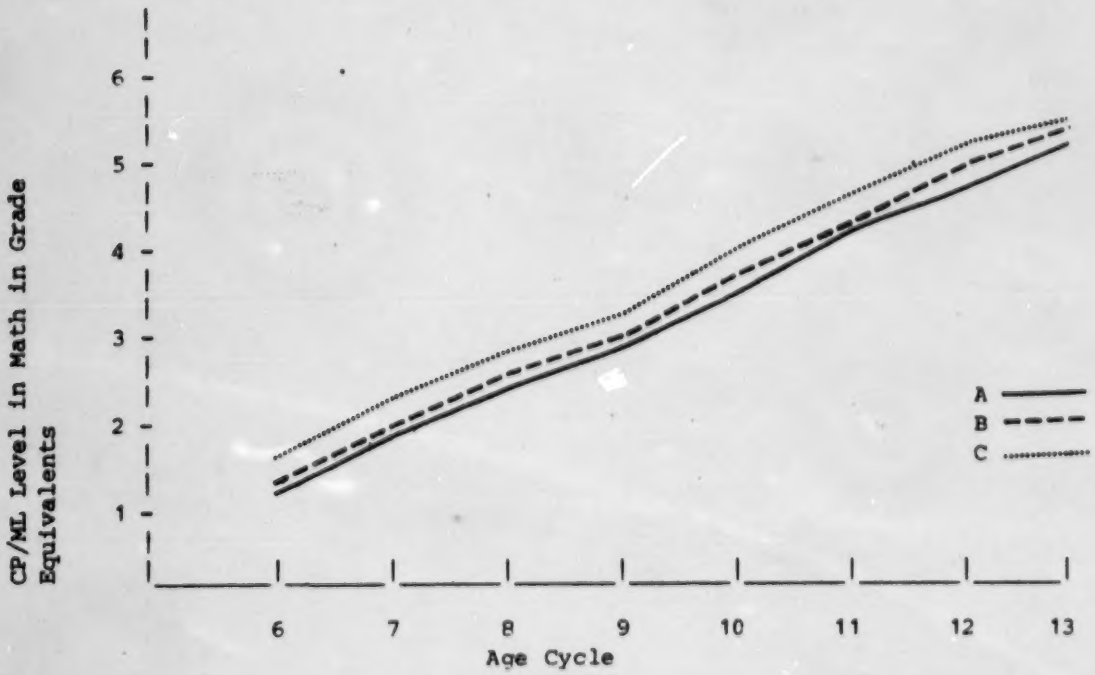


FIGURE 15. Mean Reading Gain (ITBS) by Age

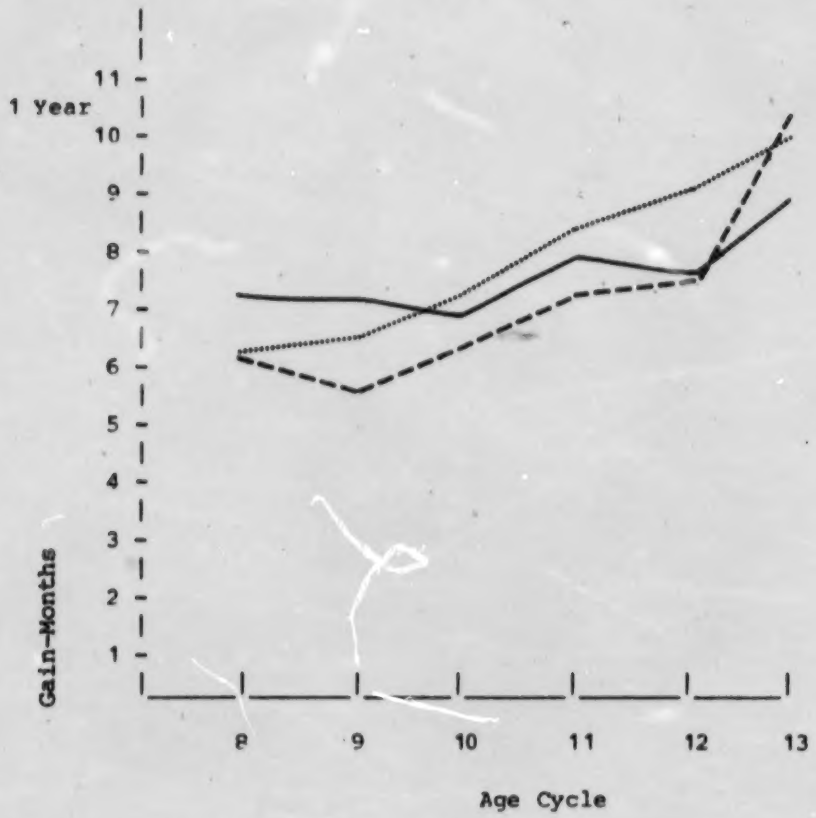
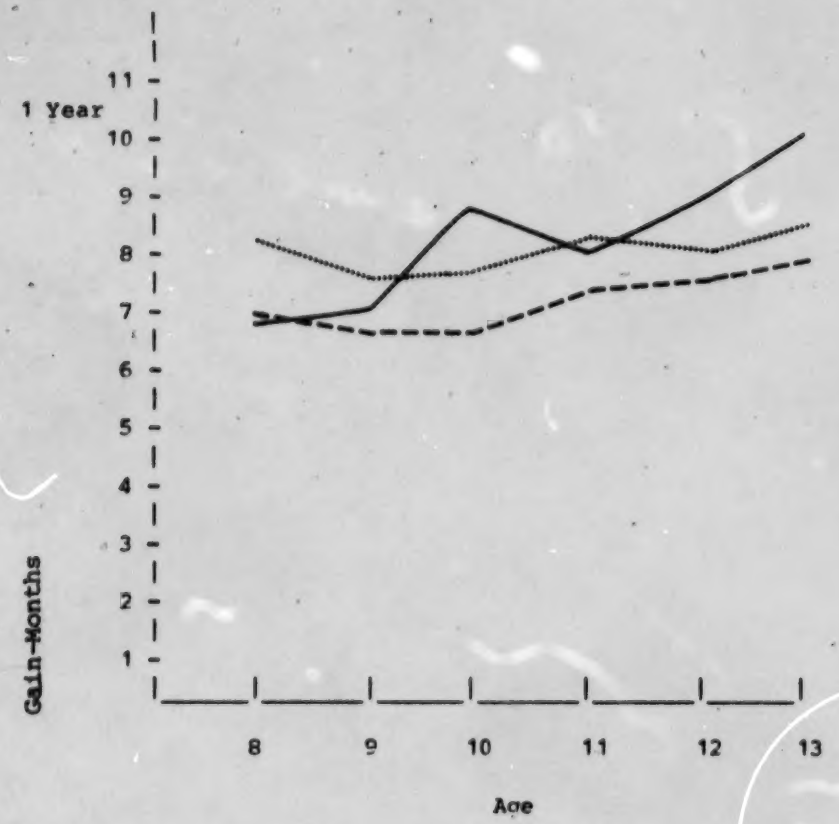


FIGURE 16. Mean Mathematic Gain (ITBS) by Age



In reading, eight and nine-year-old bilingual students gained more than either comparison group. Reading gains for bilingual or ESL program participants were above those of Title I participants though below city-wide averages; (13-year olds were an exception and were likely caused by a greatly reduced sample size). Mathematics gains for students receiving bilingual services were generally equal to or higher than city-wide averages with the exception of eight and nine-year-olds. Bilingual program participants gained on the average 7.5 months in reading and 9.7 months in mathematics as measured by the CP/ML levels. CP/ML reading and math gains followed patterns similiar to ITBS gains (Table 4).

TABLE 4. CP/ML Reading and Math Gains by Instructional Category

INSTRUCTIONAL CATEGORY	READING GAINS (Months)	MATH GAINS (Months)
A	7.1 (N = 5875)	10.0 (N = 6252)
B	8.5 (N = 2486)	8.8 (N = 2697)
C	7.8 (N = 1104)	9.5 (N = 1620)
TOTAL	7.5 (N = 9465)	9.7 (N = 10,565)

Table 5 displays reading and math gains for bilingual program participants by age. Gains tended to increase with age. Age cycle six students gained approximately a half year in reading. Considering that most entered school with little or no knowledge of English, little English reading gain would be expected. Older students demonstrated the most gain, some surpassing the expectation of a month-for-month gain (10 months).

TABLE 5. CP/ML Reading and Math Gains by Age

Age	Reading Gain (months)	Math Gain (months)
6	4.8	8.6
7	6.3	9.2
8	7.2	9.4
9	7.9	9.6
10	8.8	10.2
11	10.3	10.1
12	11.1	12.2
13	11.3	13.7
	(N = 9,467)	(N = 10,642)

These data indicate that bilingual program participants were learning to read in English and making progress equal to that of students enrolled in other compensatory education programs. For most students, this task included learning to understand and speak English in addition to acquiring basic reading skills. At the same time, the rate of progress of program participants in a major content area as mathematics was maintained at expected levels.

The amount of instruction in English has often been cited as a key variable which affects the differential achievement of limited-English-speaking students. An attempt was made to discern the relationship of the number of periods per day of instruction in English to the amount of gain demonstrated on the ITBS in both Reading Comprehension and mathematics.

Few students received less than two periods per day of English instruction. The number of students participating in bilingual programs who were receiving more than six periods per day in English was also limited, thus reducing the number of distinctions possible. The correlation coefficients of mathematics and reading gains on the ITBS to periods of instruction in English were also lower than expected, +.06 and + .07 respectively.

Instructional time in English contributed less than one percent to the differential gain of students in mathematics when the variance in gain scores due to age and language proficiency were held constant. For reading, the amount of variance due to English instructional time was slightly higher but still less than two percent. In other words, only a very small amount of the gain in reading and mathematics on the ITBS could be attributed to an increase in the amount of instructional time in English. These results suggest that other more powerful factors account for the differential achievement of limited English fluency students. These might include socioeconomic factors, native language fluency, previous educational experience, instructional strategies, and school and classroom characteristics.

Inter-category Movement

A major goal of the bilingual program in Chicago is to prepare limited English proficiency students to participate fully in the regular English curriculum offered by the schools. This goal encompasses both the development of an English language competence as well as the parallel conceptual development of students in all other subject areas.

A principal gauge of the effectiveness of a program in attaining this goal is the academic progress of the students. A secondary measure is the amount of movement from one instructional category to the next and finally into the regular English classroom program. This second measure, however, can only be a valid indicator of program effectiveness when it is strictly linked to academic achievement.

Beginning in the Fall of 1979 new criteria were established for the movement of students from one instructional category to the next. These reflect the relationship of instructional category placement to academic progress. They implicitly recognize that the kind of instructional program a student needs depends to a great extent on his (her) reading ability to comprehend materials written in English.

Exit Criteria for Elementary Students[7]

.Children exit from category A to category B when they have mastered the continuum of skills in reading through level D.

.Children exit from category B to category C when they are at mastery level in reading in English for their cohort age group on city-wide data...Children who are reading in English at one standard deviation below local norms for their age cycle may also be exited from B to C based on additional information contained in the child's profile...

.Children exit from category C to the general program of instruction without support when they are at mastery level for their age cycle according to national norms in reading in English. Children who are reading in English at one standard deviation below national norms for their age cycle may also be exited from C to "No Program" based upon additional information contained in the child's profile...(pg. 3-4)

[7]Differentiated Curriculum: Instructional Design--Elementary Schools. Board of Education: Chicago, 1979, pg. 3-4.

Table 6 reflects these criteria depicting the total upward movement between instructional categories by elementary school students during the 1978-79 academic year.

More than two-thirds of the students receiving bilingual services progressed to a higher category. The greatest amount of movement both in numbers and percent was experienced by those students with the lowest English proficiency. As would be expected, the greatest amount of movement occurred between adjacent categories. Few students would be expected to move from category A to the regular program (NP) during the course of a single year.

TABLE 6. Inter-Category Movement of Students by Instructional Category

Percent of Category A Students moving to Category	B	67%
	C	16%
	NP	4%
	Total	88%
Percent of Category B students moving to Category	C	30%
	NP	11%
	Total	41%
Percent of Category C students moving to Category	NP	20%
Total percent of inter-category movement		66%

In comparison to the movement demonstrated by the category A students, the proportion of category B and C students moving to a higher category was smaller. An examination of the task of moving from category B to C and from C to NP may help elucidate this phenomenon. Exit from category A requires that a student master the equivalent of first-grade English reading skills. Movement out of category B, however, requires minimally that a student read in English within a standard deviation of his cohort age group. An eight-year-old would have to gain approximately one-half year in English reading to move from category B to C. In comparison, a thirteen-year-old would have to gain the equivalent of three years in English reading to move to category C, an awesome and unrealistic expectation for a year's time frame. To exit to the regular English curriculum program (C to NP) younger students would be expected to gain the equivalent of one-half year in English reading, older students, one year.

TABLE 7. Minimum English Reading Gain Required to Move Between Instructional Categories

Age	B to C	C to NP
	(Years)	(Years)
8	1/2	1/2
9	1	1/2
10	1 1/2	1/2
11	2	1
12	2	1
13	3	1

The amount of movement between instructional categories expected during an academic year must coincide with realistic possibilities. Achievement data have shown that students receiving bilingual services gain seven tc eight months in reading and 8-10 months in math, gains comparable to those of other compensatory education programs, and in the case of math, equivalent to city-wide gains. However, few could be expected to gain the equivalent of several years in reading to move from category B to C within one academic year.

The number of years enrolled in the bilingual program is another indicator of the movement of students to the regular English curriculum. Table 8 depicts the proportion of students enrolled by years in the program for 1974, 1975 and 1979.

TABLE 8. Percent of Bilingual Program Participants by Years Enrolled

	1974	1975	1979
1st	48.7	44.8	52.0
2nd	39.8	35.1	30.9
3rd	9.4	15.0	13.6
4th +	2.1	5.1	3.5
	100%	100%	100%
	(N = 10,746)	(N = 1161 - Sample)	(N = 23,363)

The low incidence of fourth and fifth year enrollments indicates that students are indeed moving into the regular English curriculum.

High School Program Description

Bilingual services were extended to approximately 2,600 high school students in 20 high schools, representing roughly 13 percent of all students receiving bilingual services. There were 31 separate (more-than-20) bilingual programs with 131 budgeted teacher positions. Instruction was provided in ten languages including Assyrian, Cantonese, French, Greek, Italian, Korean, Laotian, Polish, Spanish, and Vietnamese.

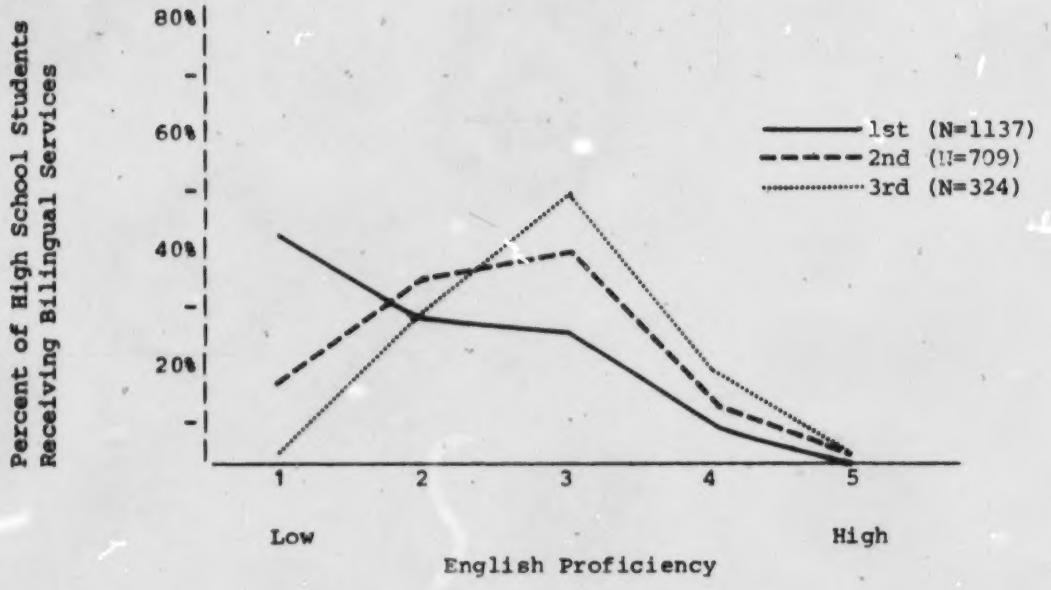
Ninety-two percent of the high school students surveyed in May 1979, were born outside the continental United States, in contrast to nearly 60 percent of the elementary school students. More than half of those students were born in Spanish-speaking countries. When only bilingual program participants are considered, the percentage of students born outside the continental United States may be somewhat higher.

Ninety-seven percent of the high school students had been receiving bilingual services for one to three years. A breakdown of the data revealed that 52 percent were in the first year, 31 percent in the second year, and 14 percent in the third year. This pattern was identical to that of the elementary school students receiving bilingual services.

Between January and May the number of high school students receiving bilingual services increased by 12 percent. The increase at the elementary level was higher.

Those in the first year of bilingual services tended to exhibit the lowest English proficiency levels. The majority of second-year students (75 percent) were rated in the mid range (levels 2 & 3), while 69 percent of the third-year students were in the mid to upper ranges (levels 3 and 4). The sharp decrease in the number of students rated 4 or 5 on the English proficiency scale suggests that as the students attain adequate or nearly adequate levels of English proficiency they no longer participate in bilingual programs. This interpretation is corrobarated by the steady decline in each year's enrollment (Figure 17).

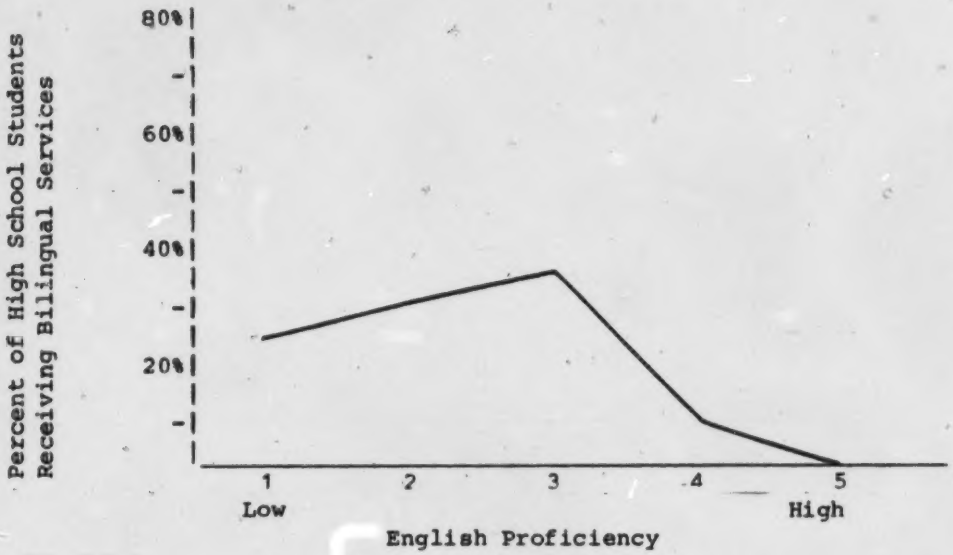
FIGURE 17. Years in Program by English Proficiency



Most high school students (76 percent) receiving bilingual services were either freshmen or sophomores, 81 percent of all freshman were in their first year of bilingual instruction, another 12 percent were in their second year. The enrollment pattern at subsequent years confirmed the freshman year entry point of most students into bilingual programs.

Figure 18 depicts the English language fluency levels of limited English proficiency high school students enrolled in bilingual programs. More than half of the students were at the lowest English proficiency levels. An additional 35 percent exhibited barely adequate English proficiency. Only 12 percent of the students had native or near native command of English. Between January and May the number of students rated at the lowest proficiency levels declined while those rated at the mid to upper levels increased.

FIGURE 18. English Proficiency of High School Students Receiving Bilingual Services



It is clear from the data that the students receiving bilingual services at the high school level were those in most need. In addition, the students receiving bilingual services tended to be new arrivals to the Chicago public schools as evidenced by the overwhelming number of students born outside the continental United States, the low English proficiency levels, and the high concentration of students in the first and second year of bilingual instruction. The data also suggest that few students coming from bilingual programs at the elementary level received bilingual services at the high school level.

A comparison of the estimated amount of instructional time in English and the native language of high school students receiving bilingual services showed a slight increase in the amount of English between January and May. The increase in English usage occurred fairly evenly over all subject areas except language arts, suggesting that English language usage increased throughout the year. Virtually all of the students received fifty percent or more of their language arts instruction in English, including 57 percent who received nearly all their language arts instruction in English. The proportion of high school students receiving at least half of their language arts instruction in English was significantly higher than elementary students. Current research supports the appropriateness of this approach citing the higher linguistic competence and literacy levels in the native language of older students as factors which permit a higher concentration of instruction in the second language.[9] Content areas as social studies and science were slightly more likely to be given in the native language than mathematics, though for both, over 70 percent of the students received at least half of social studies and science in English.

[9]Cummins, p. 229.

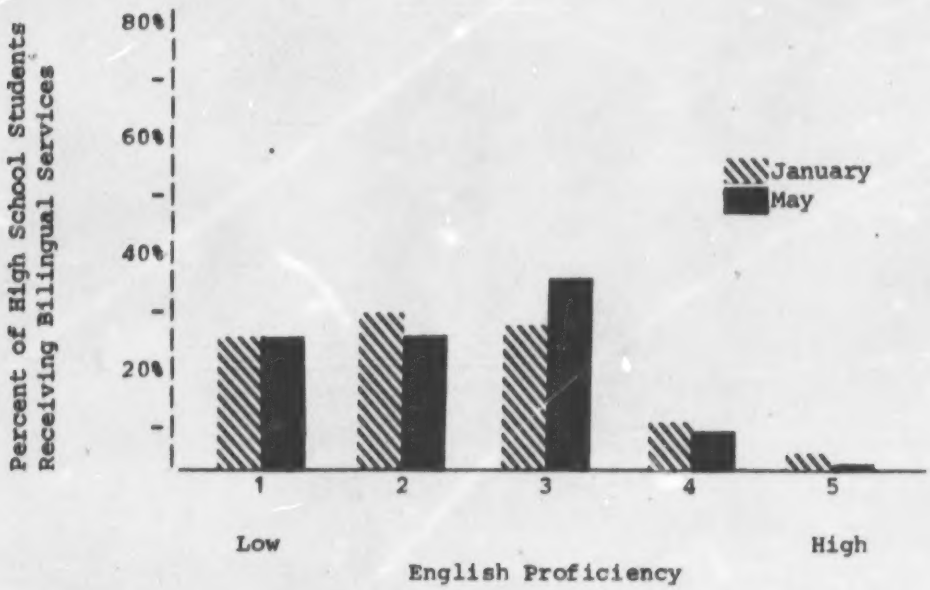
In addition to bilingual services, approximately eight percent of the students participated in a reading lab designed to give intensive practice in specific English reading skills to those students determined to need additional help.

Achievement

Achievement data on standardized tests were unavailable for high school students as were Continuous Progress reading and math levels. Grade-point averages of the students receiving bilingual services showed that nearly half of the students (48 percent) achieved at a C level; 27 percent at A & B; and 25 percent at D & F. This distribution of grades meets normal expectations with three quarters of the students achieving at or above a passing level.

Between January and May teacher evaluation of English language proficiency levels of students receiving bilingual services showed a decrease in the percentage of students at the lower proficiency levels and a comparable increase in the percentage of students at the middle level. The number of students with native or near native English proficiency remained relatively constant. It must be noted that during that same period there was a 10 percent increase in the first through third-year enrollments, of which over 90 percent occurred in the first two years. This factor would be expected to moderate any increase in English proficiency (Figure 19).

FIGURE 19. Comparison of January and May English Proficiency of High School Students Receiving Bilingual Services



Special Education Services

In May 1979, approximately 1600 students from homes where a language other than English was spoken were identified as in need of special education services. Ninety-six percent of the students identified were receiving special education services. Nearly one-fourth of these students were also enrolled in a bilingual program of instruction. For special education students, placement within a bilingual program is contingent upon the student's Individual Educational Program (I.E.P.) which is developed based on the recommendations of a multidisciplinary staffing. The English proficiency of approximately one-third of the students in need of special education services was rated at levels 1, 2, or 3; the remaining two-thirds were judged to be adequately proficient in English.

The number of special education students receiving bilingual services increased between January and May. Five percent of the special education students with English fluency levels 1, 2, or 3 received special education services from an endorsed bilingual teacher, and 39 percent of the same students received services from a bilingual aide. Less than one-fourth of the students receiving bilingual special education services from an endorsed bilingual teacher were judged to be of limited English fluency. A bilingual aide was available in nearly twice as many of the cases, but as in the previous instance, less than half of the students were judged to have limited skills in English. The data point to a need for the greater availability of bilingual special education services, as well as a redistribution of services to meet the needs of the students with the least English proficiency.

Special education services encompassed a wide variety of handicapping conditions. The most frequent of these were Moderate Learning Disabilities (MLD), Speech, Primary Educable Handicapped (EMH) and Trainable Mentally Handicapped (TMH) accounting for over 60 percent of the students. MLD and Speech services were usually supplied through a resource teacher; Primary EMH and TMH services tended to be given by a single teacher in a self-contained classroom.

The mean number of periods per day of instructional time in English for special education students receiving bilingual services was four, or slightly more than half of the day in English. As the students' English fluency increased so did the amount of English instruction. No appreciable differences were discerned among the various content areas.

Bilingual Classroom Observation Survey
Summary of Results

A total of 153 classrooms were observed by the staff of the Bilingual Unit of the Department of Research and Evaluation during the months of February through May, 1979. The mean number of minutes per classroom visits was 28. The mean class size was also 28 with 51 percent of all classes visited having 28 or fewer students. The mean age of students in these classrooms was eight years, with 51 percent of the students between the ages of five and seven, and the remainder between the ages of eight and 14. The age distribution of the sample was similar to that of the total elementary bilingual program population.

Number and type of teachers

Of the classrooms observed, 56 percent had one classroom teacher, 36 percent had two adults supervising, and eight percent had three or more adults in charge of the class. All classrooms had at least one regular teacher, 29 had teacher aides, five had student teachers, and three had other adults in the classroom. Of the classrooms with one regular teacher, 21 percent had a teacher aide.

Classroom characteristics

As shown in Tables 9 and 10, most of the classrooms were of the self-contained type (74 percent), and located in regular classroom facilities, (85 percent). The most frequent type of instructional grouping was that of the whole class receiving instruction (41 percent of the classes), followed by small group working with teacher (31 percent), and part of class receiving instruction (30 percent).* The instances whereby the whole class was working independently accounted for only 12 percent of the classes, and those where the whole class was working with a teacher aide accounted for only 10 percent of the responses.

*Multiple responses allowed

TABLE 9

Program Model

	Percent of Cases	Count
Self- Contained	74	115
Team Teaching	14	22
Pull-Out	5	9
Departmentalized	4	7
Other	3	5

Total Responses = 158

Total Cases = 153

*Multiple responses allowed

TABLE 10

Classroom Facilities

	Percent of Cases	Count
Regular Classroom	85	130
Mobile Classroom	11	17
Conference or Small Room		1
Other Non-Instructional Area	3	5

Total Responses = 153

*Multiple responses allowed

The instructional content of the classroom observed consisted mainly of language arts-English (54 percent of the classes), language arts-native (30 percent) and mathematics (22 percent).* Thus, the typical classroom observed consisted of one teacher, usually without an aide, in a self-contained classroom with the whole class receiving instruction, either in language arts-English, language arts-native, or arithmetic.

Bilingual Classroom Observation Survey

Regularly certified teachers had the most teaching experience; 68 percent had six or more years of experience compared to 11 percent of FTB certified teachers. None of the regularly certified teachers had less than two years of experience, while 34 percent had 15 or more years' experience. FTB teachers had the largest percentage of teachers with only one or two years of teaching experience (21 percent). Thus the large majority of all teachers had over two years' experience.

Teacher and teacher aide roles

Observers also noted the type of teaching methods used in the classroom. Most of the teachers observed used "questioning and discussing" in their classroom (84 percent).* The next most frequent methods used were "answering and assisting" (68 percent), and "show and tell, demonstrating" (63 percent) and "supervising and directing" (53 percent). "Praising" (27 percent) and "disciplining" (19 percent) were used least by teachers. Most of the teachers used eclectic approaches to teaching, with student participation more predominant than teacher criticism. The most frequently mentioned responsibilities for the teacher aides were reinforcing instruction (41.3 percent) and tutoring (30.4 percent).*

Language use

The amount of English used in the classroom was fairly evenly distributed (see Table 11). In one-fourth of the classrooms observed only English was used; these were primarily English language arts classes and some mathematics classes. The mean percent of instructional time in English observed for all classes was over 50 percent for all content areas except native language arts (31 percent) and science (44 percent).

Teachers were asked to estimate the percentage of English used daily in the classroom (Table 12). The majority of teachers (54 percent) used between one-third and two-thirds English daily; one-third used over 75 percent English, and only 13 percent used less than 30 percent English. The mean percent English used was 61.3. However, 20 percent of the teachers stated that they used 100 percent English in their classrooms, so percentages were also calculated without these classes. The mean percent English is reduced to 51 percent without the all English classes included; 72 percent of these classes used at least 50 percent English. Thus, even discounting the all English classes, most teachers reported using at least as much English as the student's native language.

*Multiple responses

TABLE 11

Percent of English used by Teachers

	Percent
0 - 35%	25.2
36 - 60%	21.9
61 - 95%	26.5
100%	26.5
	N = 151

TABLE 12

Teacher Estimated Percent of Daily English Use

	Percent
0 - 35%	14.4
36 - 60%	41.1
61 - 95%	24.0
100%	20.5
	N = 146

Distribution of Students by Instructional Needs Category

Teachers were also asked to report the percentage of students in their classrooms from each instructional needs category. Few classes had more than 50 percent category A students (26 percent), 22 percent had over 50 percent "B" students, 7.9 percent more than 50 percent "C" students, and 12.9 percent with more than 50 percent "NP" students. Most classes then, were not comprised of a majority of students at the same language proficiency level. In fact, only three classes had 100 percent students from a single instructional needs category.

However, classes did fall into two major groupings: (1) "A, B" classes--those classes with 50 percent or more "A" students, or 50 percent or more "B" students, or 50 percent or more "A" and "B" students; (2) "C, NP" classes--those classes with 50 percent or more "C" students, or 50 percent or more "NP" students, or 50 percent or more "C" and "NP" students. Sixty-seven percent of all classes fell into the "A, B" category, and 33 percent were in the "C, NP" category. The distribution does differ slightly when all English classes are excluded; for these classes, 76 percent are "A, B" category, and 24 percent were in the "C, NP" category. Of all the English only classes, 33 percent are "A, B" and 67 percent are "C, NP" classes. Although these 33 percent "A, B" classes in which only English is used represent only nine classrooms, they point to possible deficiencies that need to be studied further. However, it must be noted that the data are unclear as to whether the limited English students (categories A, B, and C) who were observed in all English classrooms were receiving some form of bilingual services from personnel other than the teacher present at the time.

The mean percent of time that the teachers used English for the two types of classes was also calculated; the mean for the "A, B" classes was 56 percent, and that for the "C, NP" classes was 70 percent. When the all English classes were excluded, the means were 51 percent for the "A, B" classes and 63 percent for the "C, NP" classes. These rough measures of teacher language use indicate that teachers do differentiate their English language usage based on the instructional needs of their students. However, it is also apparent that varying levels of students' English language proficiency within a single classroom make it difficult for teachers to gear their language use to the needs of all students.

In order to measure the magnitude of any relationship between teacher's English language use and students' category placements, Pearson correlation coefficients were calculated for teacher's daily use of English with the percentage of students in each category per classroom. The coefficients reveal that the percentage of "A" students in a classroom was the better predictor of the amount of English used than are any of the other three categories, "B, C, or NP" (Table 13). The more "A" students per class, the less English used by the teacher. The percentage of "A" students was also the only category which had a negative relationship with the amount of English used; that is, as the percentage of students in any of the other categories increased, the amount of English language used was more likely to increase than decrease. The fact that the percentage of "A" students was more likely to influence a teacher's language

use than the percentage of any other category of students can perhaps be explained by the fact that if the students in a classroom all have the same native language background, teachers will gear their language use to that known by all students. That is, "A" students are not likely to know any English, but "NP" students may know the native language of the "A" students as well as English. Further research is needed in this area in order to determine if students instructional needs are actually being served, particularly for students in a classroom with students with different English language needs.

TABLE 13

Correlation of Instructional Category to Percent of Daily English Instructional Time

% Students in each category	% Daily English Instruction N = 131
A	-.60
B	.11
C	.28
NP	.33

Native,
English Language Proficiency

Observers also rated teachers language proficiency in both English and native language on a scale from 1 to 5. Teachers proficiency in both languages was generally rated high. The mean English rating was 4.7 and that for the native language used was 4.6. These means were relatively similar regardless of teacher experience or certification, or amount of English used in the classroom.

English Reading Groups

Almost all of the classrooms had at least one reading group in English as well as the students' home language; 6.5 percent had no English reading groups, 6.7 percent had no home language reading groups. The large majority however had three or more reading groups in both English (79 percent) and home language (68 percent).

The English language approach used in teaching English language arts in most of the classrooms was a reading series (82 percent) and TESL (68 percent).* Only 30 percent of the classrooms used the Intensive Reading Improvement Program (IRIP) service. Approximately 84 percent of the teachers charted student progress using CP/ML cards. Few used native language levels CP/ML (18 percent) while 48 percent used individual learning plans.

*Multiple responses allowed

Summary of Bilingual Teacher Questionnaire Results

A total of 419 questionnaires were returned from 93 different schools, representing a sample of more than a third of the total number of bilingual teachers and schools with bilingual programs. The majority of teachers taught in a self-contained program (59 percent), with most of the remaining teachers divided equally among team-teaching programs (14 percent), departmentalized programs (13 percent), and pull-out programs (14 percent). Only three of the total number of teachers taught in a full-day integrated program. This distribution differs from the 1978 sample in that the percentage of teachers in a team teaching program decreased by almost half from 23 percent to 14 percent. While those in self-contained models increased from 49 percent to 59 percent. Other differences cannot be ascertained since the categories used were slightly different in 1978.

Most teachers in the sample were certified at the primary (53 percent)* or intermediate levels (48 percent). Only 32 percent of the respondents were certified at the secondary level. Most of the teachers were bilingual endorsed (96 percent), and 71 percent have had three years or more of bilingual teacher experience. The mean number of years of bilingual teaching experience is 3.9.

At every level of teacher certification (primary, intermediate, secondary), two-thirds or more of the teachers had three or more years of bilingual teaching experience. Teachers in self-contained programs had the highest mean years of bilingual teaching experience (4.2), followed by teachers in departmentalized programs (3.9), team-teaching programs (3.5) and pull-out programs (3.2). The highest percentage of teachers with less than two years of bilingual experience was for those in the pull-out program (45 percent), and the lowest was for those in the self-contained program (23 percent). Thus, teachers with the most exposure of students on a daily basis were those with the most experience in bilingual teaching.

The large majority of teachers certified at the primary and intermediate levels were in the self-contained bilingual program (64 percent 63 percent respectively), compared to 38 percent of the secondary-certified teachers. A substantial number of the secondary teachers were in the departmentalized program (34 percent), with 16 percent in the pull-out and 12 percent in the team-teaching program.

*Multiple responses allowed

Language Use

Only nine percent of the teachers indicated that their weekly use of English in the classroom was less than 20 percent. The large majority of teachers (75 percent) used English at least 40 percent of the time; of those 39 percent used English at least 60 percent of the time and over a third (35 percent) used English about equally with their native language.

Teachers certified at either the primary or intermediate levels reported similar amounts of language use; over one-third used over 60 percent English, compared to 42 percent of the secondary certified respondents. The primary and intermediate teachers were more likely to use both language equally than were secondary teachers who used either slightly more or slightly less English.

Teachers with five and six-year-old students were most likely to use both languages equally. Teachers with seven to thirteen-year-old students were more apt to use slightly more English, and teachers with 14-year-olds reported using slightly more home language. Except for teachers of 14-year-olds, no more than one-third of the teachers used less than 60 percent in their classrooms.

Virtually all of the teachers rated their English language proficiency as "good" (31 percent) or "excellent" (67 percent), with the remaining two percent self-rated as "fair." Over two-thirds of the teachers rated their non-English language proficiency as "excellent" (71 percent), 27 percent as "good," and only two percent as "fair."

No major differences occured in English or native language proficiency among teachers certified at different levels. Teachers certified at the intermediate level had a slightly higher percentage rated as excellent in English (73 percent), as compared to primary certified teachers (63 percent) and secondary certified teachers (68 percent). The percentages were virtually reversed for native language proficiency, with secondary teachers having the highest percentage of excellent rating (74 percent), compared to 70 percent of primary certified teachers and 74 percent of intermediate certified teachers.

Teacher Language Proficiency and Language Use

Teachers who rated their English language proficiency as "good" were slightly less likely to use as much English in the classroom as teachers who rate their English proficiency as "excellent." Forty-five percent of the latter used English at least 60 percent of the time, compared to 31 percent of the former. However, over 70 percent of both groups used at least 40 percent English per week.

On the other hand, teachers who rated their native language proficiency as "good" were slightly more likely to use more English in the classroom than teachers who rated their native language as "excellent." Thirty-five percent of the latter used English at least 60 percent compared to 48 percent of the former. Seventy and 80 percent of the "excellent" and "good" native speakers, respectivly, used at least 40 percent English. Thus, English and native language proficiency may play some role in determining amount of classroom English use, but it is impossible to confirm such a relationship until both the English language proficiency of the students and the type of program are known. It is likely that these latter factors are critically important in determining the amount of English used in the classroom. Further investigation of these variables is needed in order to ascertain if language proficiency in either English or native language is a consideration in the assignment of personnel to specific programs and models.

Teachers were also asked to indicate which language they were most likely to use in a particular situation, using a scale from 1 to 5, with 1 equal to "only native," and 5 equal to "only English" use. Thus, a mean greater than 3 indicates greater English use and a mean less than 3 indicates greater native language use.

The greater amount of English use was found for three commands; "asking to line up" (3.3), "telling to put things away," (3.3), and "telling to be quiet" (3.1). All of the other situations have means between two and three. The lowest means were for the teaching of subject matter; "teaching science" (2.5), "teaching social studies" (2.6), and showing a math problem (2.6), and for telling the students to get their parents permission for something (2.5). The mean of the remaining item, "telling students to pay attention," was slightly higher at 2.8.

Therefore, when teaching subject matter, teachers were somewhat more likely to use the students' native language than English, but no language was necessarily preferred for every command.

The same pattern of language use held true within categories of overall language use. The means for teachers whose English language use per week ranged between 40 and 50 percent were virtually the same as those just reported. The means were uniformly higher for teachers whose overall English language use was high (between 80 and 100 percent), and the means were uniformally lower for teachers whose overall English language use ranged between 0 and 39 percent. In other words, the differences in situational language use were similar regardless of teachers overall language use. The values of the means varied, not the pattern of differences.

Teachers were also asked to indicate on a scale from 1 to 5, how much of a problem they have had with a series of items (1 = minor problems, 5 = major problem). Table 16 displays the items in their relative order of severity.

The items that were the least problematic for teachers were "lack of teacher cooperation" and "lack of administrative support," with means of 1.8 and 1.9 respectively. The next highest means were concerned with student and classroom characteristics: "wide age range" (2.1); "student transiency" (2.4), and "class too large" (2.5). The next highest means were concerned with a wide range of issues; "lack of parent interest" (2.6); "lack of an aide" (2.6); insufficient supplies" (2.7) wide English proficiency range among students: (2.8), and "too much testing" (2.8). The two items with the highest means were "wide ability range" (3.3), and "too many questionnaires and forms" (3.5).

The four items that were most problematic then, were basically of two types: (1) student characteristics-wide ability range and wide English proficiency range; and (2) administrative tasks-too much testing and too many questionnaires and forms. The former problem is undoubtedly exacerbated by the latter. Incorporating the needs of a wide range of students is necessarily time consuming and difficult, so that any additional time spent in testing and paperwork makes these teacher jobs even more difficult.

TABLE 14. Problems Cited by Bilingual Teachers

Rank Order	Problem	
1.	Too many questionnaires	3.5
2.	Wide ability range	3.3
3.	Too much testing	2.8
4.	Wide English proficiency range	2.8
5.	Insufficient supplies	2.7
6.	Lack of an aide	2.6
7.	Lack of parent interest	2.6
8.	Class too large	2.5
9.	Student transiency	2.4
10.	Wide age range	2.1
11.	Lack of administrative support	1.9
12.	Lack of teacher cooperation	1.8

The instructional model in which the teachers worked also affected their definition of problems. Teachers in team-teaching situations cited large class size as important but were less concerned about a wide age range. Teachers in pull-out and departmentalized problems indicated that insufficient supplies were a problem of moderate concern. Those in pull-out models also cited wide age range as a difficulty more often than those in other models but were least concerned with large class size.

There were minor variations in the ratings of mean seriousness of problems among all teachers in various program model types. Overall, however, the problems most teachers encountered clustered around wide ability and English proficiency ranges and administrative tasks (questionnaires, forms, testing) apparently considered peripheral to the instructional process. To a lesser degree a lack of resources, both staff and supplies, were cited as troublesome areas.

While some of the problems cited are common to a majority of teachers throughout the school system, wide English proficiency range seems to be a problem which affects to a greater degree teachers in bilingual programs, and one which must be considered when making organizational decisions concerning bilingual education programs.

Special Projects

During Fiscal 1979 a number of special projects relevant to the Chicago public schools' program of bilingual education were carried out by the Department of Research and Evaluation. These included the translation and development of the Spanish Criterion-Referenced Tests in Mathematics, refinement of student placement procedures, updating of the longitudinal data base, the translation of the Assyrian version of the Short Tests of Linguistic Skills (STLS), and calibration of the Spanish/English version of the STLS.

The Criterion-Referenced Tests (CRTs) in Mathematics, Spanish edition, are a group of instruments which measure the terminal objectives in the Behavior Objectives for Mathematics Levels A to V - Elementary School. The Criterion-Referenced Tests in Mathematics, Spanish edition were developed in order to:

- fully implement a continuous progress/mastery learning mathematics program in the child's native langauge.
- provide a uniform method of assessing mathematics progress throughout the Spanish bilingual programs within the Chicago elementary public schools.
- assess the Spanish bilingual student's mastery of the terminal mathematics objectives.

The CRTs in Mathematics cover ten skill topics: sets, meaning of numbers, place value, operations with whole numbers, rational numbers, measurement geometry, integers, real numbers and probability and statistics.

The CRTs in Mathematics correspond to each of the thirteen mathematics levels A through V, as they appear in the mathematics curriculum guides. These objectives define skills a student should have before moving on to the next mathematics level. Although all of these objectives are considered important, a small group of terminal objectives were selected from each level, for a total of 249 terminal objectives.

The development of the Spanish CRTs in Mathematics began in Fiscal 1978 at which time the complete set of intermediate and upper level tests were translated and/or developed. However, major revisions were made in the Mathematics CRTs in English causing a complete revision of the Mathematics CRTs in Spanish. A small pilot of the topic 'Operations with Whole Numbers' Spanish edition had also revealed that the format required too much reading and would have to be changed in order to better measure the objective and the mathematics progress of the student.

During fiscal 1979 tests were written and/or translated for the primary cycle (levels A through H). In the process of writing these tests, the writers took care to assure that the English and Spanish items remained parallel, while also checking for possible cultural or linguistic bias in the items. The tests were reviewed by a panel of bilingual and mathematics educators and after some revisions the tests were approved. In fiscal 1979 the intermediate and upper cycle tests (levels J through V) were revised and many new items were generated. It is expected that the entire Mathematics CRTs in Spanish will be available for extensive field testing in Fiscal 1981.

Placement Procedures and Longitudinal Data Base

The bilingual data files were developed so that a student is added to the file when he or she enters the Chicago school system. The student is classified as to the type of instructional program that would be most appropriate to meet his or her educational needs using the entrance criteria. A profile of the educational data is printed for each student along with instructional recommendations. The file is updated monthly and students who transfer from one school to another are identified along with students who leave the system. The information on each student from a non-English background is updated from the various educational and program participation files which include the student Master File, the Standardized Achievement record file, the Title I Achievement file, the Title I Participant file, the Bilingual Achievement files, the Attitude Survey files, the Special Education file, the Minimum Proficiency file, the Bilingual Census file, and the Access to Excellence file. Data from each of these files are used to update the Bilingual data file. At the end of each year the data available for the student are combined to form a final record for the student. This file is retained as an archive for that year. The archive file is then used to evaluate a student's educational progress and his/her educational needs for the next year using the exit criteria.

Following the reevaluation of students a new record is created with the original instructional needs category, the instructional needs category from the previous year and the new instructional needs category. The most recent achievement data are also retained and additional space is allocated for recording of new data from the files listed above. The new record becomes the archive record at the end of the next year.

Following the completion of the academic year a new profile is created for each student. This is sent to the school for use in development of the student's educational program. A summary of the student's instructional needs is used to assist in the staffing and organization of the schools. The archive tapes of each year can be combined using the bilingual merge program to create a longitudinal file with up to 15 years of archive files. Selected archive years can be combined to form files of interest. The current archive data file is being revised to collect and maintain additional data requested by the Illinois State Board of Education. Previous archive files and the associated programs will be converted in FY81 to reflect the additional data requested by the state.

The Short Tests of Linguistic Skills (STLS) were developed to determine the language proficiency of bilingual students. Tests have been developed in English and 11 languages including: Arabic, Assyrian, Chinese, Greek, Italian, Japanese, Korean, Pilipino, Polish, Spanish, and Vietnamese. Spanish and Korean versions were field tested during Fiscal 1977 and 1978, an Assyrian version was completed the following year.

During 1979 the STLS results of a sample of 1000 students fluent in English and 500 students fluent in Spanish were analysed using the Rasch model, a latent trait model designed to single out items which do not fit the construct of fluency in English or in Spanish. After removing the defective items the English and Spanish subtests were calibrated. (See Appendix F)

APPENDIX

BILINGUAL PARTICIPANT FORM INSTRUCTION SUMMARY

THIS FORM MUST BE FILLED OUT FOR:

(1) ALL STUDENTS WHO WERE CLASSIFIED INTO THE BILINGUAL PROGRAM (PROFILE CATEGORY A,B OR C FOR ELEMENTARY STUDENTS AND "IN PROGRAM" FOR HIGH SCHOOL STUDENTS) WHETHER OR NOT THEY ARE CURRENTLY RECEIVING BILINGUAL OR ESL SERVICES

(2) ANY OTHER STUDENTS WHO ARE NOW RECEIVING BILINGUAL OR ESL INSTRUCTION OR TITLE VII SERVICES, REGARDLESS OF THEIR BILINGUAL PROFILE CATEGORIES

For students in a bilingual program, fill out sections A through N, P through U, and appropriate sections on the reverse side. For students receiving ESL only, fill in sections A through N, S, and U, and appropriate sections on the reverse side.

For students not in a bilingual or ESL program, fill in sections A through G1,H,I, J,U,KK, and appropriate sections on the reverse side.

IF YOU ARE USING A PREPRINTED FORM, MAKE SURE THAT THE UNIT NUMBER AND AGE CYCLE ARE CORRECT. IF THEY ARE NOT CORRECT, DESTROY THE FORM AND FILL OUT A BLANK FORM FOR THE STUDENT. IF A STUDENT IS NO LONGER ENROLLED IN YOUR SCHOOL, YOU NEED NOT FILL OUT A FORM FOR THAT STUDENT.

A. Student Identification Number. If not preprinted, enter student's eight digit number.

B. Unit Number. If preprinted, check accuracy. Fill out new form if incorrect.

C. Room-Division Number. Fill in the student's 3 digit room number. If the room number contains a letter, replace the letter with the number "9."

D. Age-Cycle. If preprinted, check accuracy. If incorrect, fill out new form. If filled out in July through December, student's age as of Dec. 1, this year. If filled out in the Spring, student's age as of Dec. 1 last year.

E. Fill in M for male or F for female.

F. Fill in place of birth for all students.

G1. If student is currently receiving bilingual or ESL services, fill in "yes" and go on to G2. If student is not receiving these services, fill in "no" and skip section G2, but complete sections H through J, U, KK, and the appropriate sections on the reverse side.

G2. If the student is receiving bilingual or ESL services fill in the appropriate circle.

H. Language Proficiency Level. Rate the student's current English language proficiency. Note that the presence of an accent which does not interfere with effective communication should not be considered in determining the student's level.

Level I. The student understands very little and produces only isolated words or phrases in English.

Level II. The student understands and can communicate in English, but with great difficulty.

Level III. The student comprehends most of what is said to her/him and communicates fairly well although her/his fluency is not comparable to that of Level IV students.

Level IV. The student comprehends and communicates adequately, but her/his fluency is not comparable to that of English speaking peers.

Level V. The student's English proficiency is equivalent to that of native English speaking peers.

I. Instructional Needs Category. Assess the student's current instructional needs.

A Speaks and understands little or no English and needs all content area instruction in the home language.

B Speaks and understands some English, but needs about half of her/his instruction in the home language.

C Speaks and understands English well enough to participate in a classroom in which English is used most of the time; can receive almost all instruction in English.

MP The pupil's language ability is equivalent to that of native English speaking peers, and she/he can perform adequately in an all-English classroom.

PLEASE MAKE SURE THAT EACH STUDENT'S I.D. NUMBER IS CORRECTLY CODED. IF IT ISN'T, THE STUDENT WILL NOT BE INCLUDED IN YOUR SCHOOL'S TALLIES.

J. Fill in language spoken at home. A complete list of codes is in Appendix A
Some commonly used codes are:

10-Arabic	21-Cantonese	03-Italian	08-Korean	04-Polish	01-Spanish
25-Assyrian	02-Greek	11-Japanese	09-Pilipino/Tagalog	07-Serbo-Croatian	34-Vietnamese

K. Fill in the month the student started in any bilingual program this year.

L. Fill in how many years the student has been in the bilingual program.

M. Fill in all that apply.

N. Fill in the average number of minutes per week of TESL instruction. If greater than 299 minutes, fill in 299.

O. Omit this section.

P. In what language is student receiving bilingual instruction? See list of codes in Appendix A.

Q. Fill in only for students in bilingual program or ESL program. If a student does not receive home language instruction every day, determine how many periods per week is received, and divide this by 5 to obtain the average number of periods per day. (English instruction includes ESL instruction)
Note: The sum of the periods per day in English and home language is usually 7.

R. Enter the relevant amount of home language and English used during instruction in each of the four subject areas. Note that the amounts are ranked in 5 categories from almost all home language to almost all English language instruction.

S. If you are filling the form out in Sept. through Jan., omit this section. If filling out in the Spring, fill in the number of days present and absent as of the end of the third marking period.

T. Home Language Performance. Fill in only for students in the bilingual program. Estimate student's reading and speaking/listening performance in home language. If you don't speak the student's home language, have a bilingual teacher familiar with the student give his/her estimate. If no estimate is available, fill in "don't know."

U. The person filling out the form should sign his/her name and fill in the circle correspohding to his/her position.

TURN OVER FORM AND FILL IN APPROPRIATE SECTIONS

If the student is in elementary school, fill out sections AA through GG.

AA. Indicate student's English continuous progress reading level.
BB. Indicate student's home language continuous progress reading level.
CC. Indicate student's continuous progress math level.
DD. Indicate whether the student is in the Language in Transition program.
EE. Indicate whether the student is in any Title I Program other than Language in Transition.
FF. Indicate whether the student is enrolled in any other special reading program, (i.e., TU-READ, IRIP, etc.)
GG. Indicate whether the student or any one of his/her teachers is receiving Title VII services. Fill in all that apply.

HH. Fill in for all high school students. Indicate the student's year in school, his/her grade point average, and whether he/she has been enrolled in a reading lab at any time during this school year.

II,JJ. Fill in these sections only if the student has been assigned a special education classification whether or not they are receiving bilingual services. Determine the student's code from his/her status card or from Appendix B.

KK. Fill out only for students not receiving bilingual or ESL services. Indicate the reason student is not receiving either service and fill in all that apply. Also indicate the date the student left the program.

MAKE SURE THAT THE STUDENT'S UNIT NUMBER AND AGE CYCLE ARE CORRECTLY CODED.
PLEASE DO NOT ATTACH PAPER CLIPS, STAPLES, OR RUBBER BANDS TO THE FORMS

BILINGUAL PARTICIPANT FORM

School Name

Fill out sections A through J and U for all students

Please follow all instructions carefully

STUDENT ID NO.	UNIT NO.	RM/DIV	AGE CYCLE	SEX	BIRTH PLACE	Is the student currently receiving Bilingual Services?	Rater's Evaluation of Student's Language Proficiency	Instructional Needs Category
A				Male / Female F	○ U. S. A. ○ AFRICA ○ ASIA ○ CUBA ○ EUROPE ○ MEXICO ○ MID-EAST ○ PACIFIC ISLES ○ PUERTO RICO ○ OTHER LATIN AMERICA ○ OTHER	G1 Yes ○ (Go to G2) No ○ (Fill in A-J, U and proper grids on back) Service received (fill in one) Fill In: ○ Bilingual A-U ○ ESL only A-O If neither, A-J, U & KK	○ Level I ○ Level II ○ Level III ○ Level IV ○ Level V	○ A ○ B ○ C ○ NP

Primary Non-English Language at Home:	Month started in program this year:	Time in Bilingual program	Who provides the student's ESL instruction?	Average no. of minutes/week of TESL instruction	Location in TESL strand	Non-English language of instruction	Average no. of periods/day of instruction in: English / Home language
	○ Sep ○ Oct ○ Nov ○ Dec ○ Jan ○ Feb ○ Mar ○ Apr ○ May ○ Jun	○ 1st yr. ○ 2nd yr. ○ 3rd yr. ○ 4th yr. ○ 5th yr. or more	○ Student does not get ESL ○ Regular teacher ○ Endorsed Bil. Teacher ○ ESL teacher ○ None of above				○ 0-.9 ○ ○ 1-1.9 ○ ○ 2-2.9 ○ ○ 3-3.9 ○ ○ 4-4.9 ○ ○ 5-5.9 ○ ○ 6-6.9 ○ ○ 7 or more ○

Language of Instruction:

	Almost all Home lang.	½ home ½ Engl.	Almost all Engl.
Language Arts	○	○	○
Math	○	○	○
Social Studies	○	○	○
Science	○	○	○

60

Attendance

Days Present	Days Absent

Home Language Performance

	Reading	Speaking/ Listening
Below age level	○	○
At age level	○	○
Above age level	○	○
Don't know	○	○

IMPORTANT!

Please complete all appropriate grids on the other side:

- AA-GG for all elementary students
- HH for all high school students
- II and JJ for all students with special education codes
- KK for all students not currently receiving bilingual services

Signature of person completing form: _____

Fill in only one:

○ Bil. Endorsed teacher	○ Adjustment teacher
○ ESL teacher	○ Bilingual coordinator
○ Other classroom teacher	○ Other

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FILL OUT FOR ALL ELEMENTARY STUDENTS ONLY

Continuous Progress Levels

READING				MATH	
English		Home language			
A	H	A	H	A	H
B	J	B	J	B	J
C	K	C	K	C	K
D	L	D	L	D	L
E	M	E	M	E	U
F	N	F	N	F	V
G		G		G	

Is the student enrolled in the L.I.T. program?
Yes ○ No ○

Is the student enrolled in any other Title I program?
Yes ○ No ○

Is the student enrolled in any other special reading program?
Yes ○ No ○

Title VII services (including staff development) are being received by: (Fill in all that apply)
Student ○ Teacher ○ Neither ○

Fill out for all HIGH SCHOOL Students only

Year	Grade Point Average
9 Frsh	A ○ B
10 Soph	C
11 Jr	D ○ F
12 Sr	

Is the student enrolled in a reading lab?
Yes ○ No ○

SPECIAL EDUCATION

(Fill out ONLY if the student has been assigned a Special Education classification)

Special Ed Code

0	0
1	1
2	2
3	3
4	4
5	5
6	6
	7
	8
	9

Is the student currently receiving Special Education services?
Yes ○ No ○

Is the Special Education teacher endorsed in the pupil's home language?
Yes ○ No ○

Is a teacher aide available who can converse in the pupil's home language?
Yes ○ No ○

OTHER CODES

0	0	0	0	0	0	0	0	0	0	0	0
1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5
6	6	6	6	6	6	6	6	6	6	6	6
7	7	7	7	7	7	7	7	7	7	7	7
8	8	8	8	8	8	8	8	8	8	8	8
9	9	9	9	9	9	9	9	9	9	9	9

Fill out ONLY for Students who are not receiving bilingual or ESL services.
(Fill in all that apply)

- ○ Student is no longer enrolled at this school.
- ○ Parents refused consent.
- ○ Profile indicated services are no longer needed.
- ○ Local staff feel services are no longer needed.
- ○ Student could use services, but staff is not available.
- ○ Other

DATE LEFT PROGRAM

Month		Year	
0	0	0	0
1	1	1	1
	2	2	2
	3	3	3
	4	4	4
	5		5
	6		6
	7		7
	8		8
	9		9

KK

GENERAL INSTRUCTIONS

Use ONLY a soft (No. 2 or softer) black lead pencil
Fill in the desired circle completely and darkly
Erase any answer you want to change cleanly and completely

BAD MARKS ○○✓ ○⊠○ ●○○

GOOD MARKS ○○● ○●○ ●○○

APPENDIX B

Multilingual Census Form Instruction Summary

This form is to be filled out for all students that are new to the Chicago Public schools and are from a home where a language other than English is normally spoken.

These sections of the MCF are to be filled out FOR EVERY STUDENT: A, B, C, E, J, R, S, T, U, Y or Z, BB Fill out section P only for students currently enrolled in a bilingual program.

Fill out a blank form for the student, completing sections C, S, U, V, and X.

A. Language Proficiency Level: Note that the presence of an accent which does not interfere with effective communication should not be considered in determining the student's level.

Level I: The student understands very little and produces only isolated words or phrases in English.

Level II: The student understands and can communicate in English, but with great difficulty.

Level III: The student comprehends most of what is said to him/her and communicates fairly well although his/her fluency is not comparable to that of Level IV students.

Level IV: The student comprehends and communicates adequately, but his/her fluency is not comparable to that of native English-speaking peers.

Level V: The student's English proficiency is equivalent to that of native English-speaking peers.

B. Proficiency Category (Instructional Needs)

A: Speaks and understands little or no English and needs all content area instruction in home language.

B: Speaks and understands some English but needs some instruction in home language.

C: Speaks and understands English well enough to participate in a classroom in which only English is used.

Note that these do not correpond to the Board's bilingual profiles classifications.

C. Student's birthdate.

D&F. Omit these sections.

E. Fill in place of birth for all students.

XX, G, H, & I. Omit these sections.

J. Language spoken at home. A complete list of codes is in the Appendix A of the manual. Some commonly used codes are:

10 - Arabic 21 - Cantonese 03 - Italian 08 - Korean 04 - Polish
01 - Spanish 25 - Assyrian 02 - Greek 11 - Japanese
09 - Pilipino/Tagalog 07 - Serbo-Croatian 34 - Vietnamese

K, L, M, N, O, Q. Omit these sections.

P. Fill this out only for students in a bilingual program. Estimate, if possible, student's performance in home language.

R. Complete this section last. Instructions are on pages 14-27 of this booklet. page.

S. Student I.D. number CHECK ACCURACY of eight-digit I.D. number.

T. Special education code. Omit this section.

U. Unit number. Fill in for all students.

V, W & X. Omit these sections.

Y. Indicate continuous progress reading and math levels for elementary school students.

Z. Fill out year in school for high school students. "Evaluation" is grade point average: + is B or better, = is C and - is D or lower.

AA. Omit this section.

BB. Indicate whether the person who administered section E can speak the student's home home language.

MAKE SURE THAT THE STUDENT'S ID NUMBER AND BIRTHDAY ARE CORRECTLY CODED. PLEASE DO NOT ATTACH PAPER CLIPS, STAPLES OR RUBBER BANDS TO THE FORMS

GRADE

PRE-SCHOOL ○ K ○ 1 ○ 2 ○ 3 ○ 4 ○ 5 ○ 6 ○ 7 ○ 8 ○ HS ○ 9 ○ 10 ○ 11 ○ 12 ○

CC

DOWNSTATE STUDENT IDENTIFICATION

DISTRICT	SCHOOL	GRD. ENT'D.	YR. ENT'D.	STUDENT #
		DD		

SPECIAL CODES

						EE							

DIRECTIONS

MULTILINGUAL CENSUS FORM

CHICAGO ONLY - ALL OTHERS OVER

STUDENT NAME: _____

STUDENT ID NO.

SPEC. ED. CODE

UNIT NO.

RM/DIV

BIL RM

AGE CYCLE

ELEMENTARY

INST. READ (A) (B) (C) (D) (E) (F) (G) (H) (J) (K) (L) (M) (N)

LEVEL MATH (A) (B) (C) (D) (E) (F) (G) (H) (J) (K) (L) (U) (V)

HIGH SCHOOL

YEAR 9 10 11 12

EVALUATION + − =

BIL TCHR ID

CAN RATER CONVERSE IN STUDENT'S NON-ENGLISH LANGUAGE

YES ○ NO ○

RATER'S NAME: _____

POSITION: 68

FILL IN FOR ALL STUDENTS

RATER'S EVALUATION OF STUDENT'S LANGUAGE PROFICIENCY

- ○ LEVEL I
- ○ LEVEL II
- ○ LEVEL III
- ○ LEVEL IV
- ○ LEVEL V

LANGUAGE PROFICIENCY CATEGORY

○ A ○ B ○ C

Mo. STARTED IN PROGRAM THIS SCHOOL YEAR

- ○ Sep ○ Feb
- ○ Oct ○ Mar
- ○ Nov ○ Apr
- ○ Dec ○ May
- ○ Jan ○ Jun

FUNDING SOURCES

- ○ BOARD
- ○ STATE
- ○ TITLE VII

BIRTH DATE — MONTH / YEAR

ENTERED PROGRAM — MONTH / YEAR

BIRTH PLACE

- ○ U.S.A.
- ○ AFRICA
- ○ ASIA
- ○ CUBA
- ○ EUROPE
- ○ MEXICO
- ○ MID-EAST
- ○ PACIFIC ISLES
- ○ LATIN AMERICA
- ○ PUERTO RICO
- ○ OTHER _____

AGE ON ARRIVAL IN U.S.A.

NON-ENGL. LANGUAGE OF INSTR.

PRIMARY NON-ENGL. LANGUAGE AT HOME

AVERAGE MINUTES PER DAY INSTRUCTION IN — ENGLISH / NON-ENGLISH

DAYS PRESENT DURING SCHOOL YEAR

DAYS ABSENT DURING SCHOOL YEAR

SEX M ○ F ○

XX

NOT in PROGRAM ○

NOT AT ALL — PERFECTLY

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

PROGRAM MODEL (Select ONLY One)

- ○ PRESCHOOL
- ○ HALF DAY
- ○ HALF DAY TEAM TEACHER
- ○ FLEXIBLE SCHEDULE
- ○ JOINT SCHOOL PROGRAM
- ○ BILINGUAL MULTI-LEVEL
- ○ 90 MINUTE
- ○ SELF CONTAINED
- ○ DEPARTMENTALIZED
- ○ ITINERANT TEACHER
- ○ CLUSTER MINI-CLUSTER
- ○ I.A.S.D. CENTER
- ○ INTEGRATED FULL DAY
- ○ OTHER

OTHER PROGRAMS

- ○ Bilingual Spec. Ed.
- ○ Other Special Ed.
- ○ LIT
- ○ Other TITLE I
- ○ Supplemental Tutoring Bilingual
- ○ TESL ESL TESOL

HOME LANGUAGE PERFORMANCE

READING		SPEAKING/LISTENING
○	BELOW AGE LEVEL	○
○	AT AGE LEVEL	○
○	ABOVE AGE LEVEL	○
○	DON'T KNOW	○

89

APPENDIX C

OBSERVER 1 2 DATE (mo) (day) (
3 4 5 6 7

CHICAGO BILINGUAL PROGRAMS 1978-79
CLASSROOM OBSERVATION FORM

School_____ Unit ____ (9 10 11 12) Teacher_____/____ (I.D.) (13 14 15 16)

Room ___ (17 18 19), Age Cycle ___ (20 21), Total time of classroom visit: ___ minutes (22 23 24)

1 - Class size -- 25-26

2 - a - Number of adults giving instruction or supervision 27
1 2 3 4+

b - Identify: (give number)
___Teacher 28
___Teacher aide 29
___Student teacher 30
___Parent 31
___Other 32_____

3 - Program Model: (check all that apply)
___Self contained 33
___Team teaching 34
___Pull Out 35
___Departmentalized 36
___Other 37_____

4 - Facilities: (check all that apply)
___Regular classroom 38
___Mobile classroom 39
___Conference or small room 40
___Other, non-instructional area 41
(hallway, coat room, lunchroom) 42
If other, ___ 1=adequate ___ 2=inadequate

5 - Role of Teacher Aide: (check all that apply)
___No aide present 43
___Reinforcing instruction with a group 44
___Tutoring 45
___Supervising 46
___Clerical 47
___Resource 48
___Other 49_____

6 - Instructional Grouping: (check all that apply)
___Whole class receiving instruction 50
___Part of class receiving instruction 51
___Whole class working independently 52
___Small group working with teacher 53
___Small group working with teacher aide 54
___Other 55_____

7 - Instructional Content: (check all that apply)
___Arithmetic 56
___Language Arts/English 57
___Language Arts/Native 58
___Science 59
___Social Studies/Skills 60
___Art, Music, Drama 61
___Physical Activity, Free Play 62

8 - Role of Teacher (check all that apply)
___Questioning, Discussing 63
___Answering, Assisting 64
___Show and Tell, Demonstrating 65
___Praising 66
___Disciplining 67
___Supervising, Directing 68
___Other 69_____

9 - Observer's rating of time used by teacher in English and native language:
English ___% 70-72
Native ___% 73-75

10 - Percent of Students in Category:

___A 1-3
___B 4-6
___C 7-9
___NP 10-12
___Unknown 13-15

11 - Percent of daily instructional time used in each language:

16

1. ___A
2. ___B
3. ___C
4. ___None

English ___ ___ ___% 17-19
Native ___ ___ ___% 20-22
Total 100%

12 - Number of reading groups:

23	English	0	1	2	3	4	5+
24	Other	0	1	2	3	4	5+

13 - Type of Approach used in Teaching English Language Arts: (check all that apply)

___TESL 25
___Reading Series 26
___Other: 27_____

14 - Does class have a IRIP service available? 28

1-Yes 2-No

15 - Teacher keeping track of CP/ML? 29

1-Yes 2-No

16 - Teacher uses CP cards? 30

1-Yes 2-No

17 - Teacher uses native CP/ML? 31

1-Yes 2-No

18 - Teacher uses Individualized Learning Plan? 32

1-Yes 2-No

19 - Number of years (total) of teaching experience: 33

1. 1 - 2 years
2. 3 - 4 years
3. 5 - 6 years
4. 7 - 8 years
5. 9 - 10 years
6. 11 - 12 years
7. 13 - 14 years
8. 15+ years

20 - Teaching certificate: (Circle all that apply)

34 ___FTB
35 ___Regularly certified
36 ___Bilingual endorsed
37 ___Other_____

21 - Level(s) certified:

38 ___Elementary
39 ___Intermediate
40 ___Secondary

22 - Rating of Teacher's Language:

41	English	1	2	3	4	5
42	Native	1	2	3	4	5

APPENDIX D

Bilingual Education Programs 1978-79 School Unit_ _ _ _ _

Teacher Questionnaire 1-4-

Dear Teacher,

The data obtained from this survey will be part of the overall evaluation report which will be made available to all schools participating in bilingual education programs. Your assistance in completing this questionnaire is critical and most appreciated. Please return this to your principal or bilingual coordinator. Thank you.

Department of Research and Evaluation
Bilingual Unit, Room 215
2021 North Burling - Mail Run #32

Please fill in or circle the appropriate responses

1. In which bilingual program model do you teach? 5

   1. Self-contained
   2. Team Teaching
   3. Integrated full day
   4. Departmentalized
   5. Pull out
   6. Other (specify)_____

2. Approximately what percentage of pupils who are now in your class began in your class in September of 1978? 6

   1. 80% to 100%
   2. 60% to 79%
   3. 40% to 59%
   4. 20% to 39%
   5. 0% to 19%

3. What is the average age cycle of your pupils? 7

   1. 5 - 6 yrs.
   2. 7 yrs.
   3. 8 yrs.
   4. 9 yrs. 11
   5. 10 yrs.
   6. 11 yrs.
   7. 12 yrs.
   8. 13 yrs.
   9. 14 yrs. 15

4. How many years have you been teaching in bilingual programs?

   1 2 3 4 5 6 7 8 9 10+ 16

5. For what level(s) are you certified?

   1. Primary 17
   2. Intermediate 18
   3. Secondary 19

6. Do you have a bilingual endorsement?

   Yes_____ No_____ 20

7. Please list the languages you use in the classroom and give your level of proficiency in each one.

	Language	Proficiency		
		Fair	Good	Excellent
21	English	1	2	3
22	_____	1	2	3

8. In the classroom, approximately what percent of time per week do you use English? 23

   1. 80% to 100%
   2. 60% to 79%
   3. 40% to 59%
   4. 20% to 39%
   5. 19% or less

9. In your experience this past year, how much of a problem have you had with the following?

		Problem Minor				Major	
A.	Insufficient supplies	1	2	3	4	5	27
B.	Transiency of students	1	2	3	4	5	
C.	Class has a wide age range	1	2	3	4	5	
D.	Class has a wide ability range	1	2	3	4	5	
E.	Class has a wide English language level range	1	2	3	4	5	
F.	Lack of cooperation among teachers	1	2	3	4	5	
G.	Lack of support of administrators	1	2	3	4	5	30
H.	Lack of an aide	1	2	3	4	5	
I.	Class is too large	1	2	3	4	5	
J.	Parents' lack of interest	1	2	3	4	5	
K.	Too much testing	1	2	3	4	5	
L.	Too many questionnaires and forms	1	2	3	4	5	35
M.	Other: _____						

11. What do you think could be done to make bilingual education more successful?

_____

_____

_____

_____

10. For each of the following situations please indicate which language you are most likely to use with your class (use the key below to answer items A through H).

Key:
1. only native
2. mainly native
3. both languages equally
4. mainly English
5. only English

A. Asking pupils to line up to go to lunch.
1 2 3 4 5 36

B. Telling pupils to put their things away and prepare for dismissal.
1 2 3 4 5 37

C. Telling the class to be quiet.
1 2 3 4 5 38

D. Telling pupils that they should get their parents' written permission to go on a class trip.
1 2 3 4 5 39

E. Asking the pupils to pay attention to an announcement over the PA.
1 2 3 4 5

F. Showing the class how to do a math problem.
1 2 3 4 5 41

G. Teaching Social Studies
1 2 3 4 5

H. Teaching Science
1 2 3 4 5

12. What do you think is the most important goal of bilingual education?

_____

_____

_____

_____

APPENDIX E

Criterion-Referenced Tests

Objetivos Terminales
Nivel A

Los alumnos:

1a-A-3	Seleccionarán el conjunto con el mayor número de elementos, dado dos conjuntos, uno de los conjuntos con dos o tres miembros, el otro de ocho a diez miembros.
1a-A-5	Podrán decir si el número de objetos en un conjunto es "más que," "menos que," "igual que," el número de objetos en el otro conjunto, dado dos conjuntos.
1a-A-7	Seleccionarán el numeral que nombra el número de cada conjunto, dado un conjunto de objetos, de uno hasta cuatro.
1a-A-9	Asignarán el numeral "o" al conjunto sin miembros.
1a-A-10	Identificarán el primero, el segundo, y el tercero en la serie, dada una serie de objetos.
3-A-1	Unirán los conjuntos y nombrarán el número de objetos en el conjunto nuevo, dados dos conjuntos de objetos que hacen un total de no más de cuatro.
3-A-2	Suprimirán un número especificado de objetos dado un conjunto de cuatro p menos objetos.
4-A-3	Identificarán y nombrarán cada parte como un cuarto, dada una unidad entera que ha sido dividida en cuatro partes congruentes.
5-A-4	Determinarán si la longitud de dos objetos es la misma o distinta.
6-A-1	Identificarán y nombrarán cada uno, dadas varias muestras de círculos, triángulos, rectángulos, y cuadrados.

El Maestro dice: Mira la hilera con la estrella. ¿Cuál de los conjuntos(grupos) tiene más miembros, el conjunto de perros o el conjunto de conejitos? Haz una "X" sobre el conjunto que tiene más miembros.

Mira la hilera con el corazón. ¿Cuál de los conjuntos tiene más miembros, el conjunto de los autos o el conjunto de los camiones? Haz una "X" sobre el conjunto que tiene más miembros.

Mira la hilera con la manzana. ¿Cuál de los conjuntos tiene más miembros, el conjunto de los árboles o el conjunto de las casas? Haz una "X" sobre el conjunto que tiene más miembros.

Mira la hilera con la taza. ¿Cuál de los conjuntos tiene más miembros, el conjunto de libros o el conjunto de lápices. Haz una "X" sobre el conjunto que tiene más miembros.

Mira la hilera con la flor. ¿Cuál de los conjuntos tiene más miembros, el conjunto de los zapatos o el conjunto de las gorras(cachuchas)? Haz una "X" sobre el conjunto que tiene más miembros.

CLAVE DE RESPUESTAS

1) X sobre el conjunto de perros

2) X sobre el conjunto de camiones

3) X sobre el conjunto de árboles

4) X sobre el conjunto de lápices

5) X sobre el conjunto de gorras

Objetivos

Seleccionarán el conjunto con el número mayor, dado dos conjuntos, uno de los conjuntos con dos o tres miembros, el otro de ocho a diez miembros.

1a-A-3(a)

Fecha_____

Nombre_____

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the City of Chicago - Chicago, - Illinois

APPENDIX F

The "Short Tests of Linguistic Skills" and Their Calibration[1]

The Short Tests of Linguistic Skills (STLS) (1976) were developed by the Chicago Board of Education to help the teacher determine language dominance of Spanish bilingual children ages 8-13. The STLS battery consists of two parallel tests, the English test and the Spanish test. Each test is divided into four subtests: listening, reading, writing and speaking, with 20 items in each subtest. Some of the items were multiple choice, with the number of choices ranging from two to four; others are scored as right or wrong by the examiner.

One of the two goals of the tests is to determine the level of English proficiency of the student. If the student knows enough English we do not need to investigate further. The other goal is to determine the level of Spanish proficiency which will help us determine the student's placement in a bilingual program, once the English test has established that need. In this paper it will be shown how bad items can be weeded out through the use of Rasch model technique. Using the same technique of the remaining pool of items develop two sets of calibrations will be developed, one for the English tests and the other for the Spanish test.

1. Item Calibration and the Rasch Model

The technique for norming is based on the Rasch model. The Rasch model is based on some common sense conditions:

1. The test is measuring performance on a single underlying trait or ability.

2. A more able student always has a better chance of success on an item than does a less able student.

3. Any student has a better chance of success on an easy item than on a difficult one.

From these conditions it follows that a student's likelihood of success on an item is a consequence of the student's ability and the item's difficulty. Rasch's stochastic response model describes the probability of a successful outcome of a person on an item only as a function of the student's ability and the item's difficulty. Item difficulties can be estimated independently of the student's abilities, thus making the concept of a norming sample irrelevant. The tests of item fit which are the basis for item selection are sensitive to high discrimination as well as to low, and so lead to the selection of those items which form a consistent definition of the trait and to the rejection of exceptional items.

---

[1] Agrawal, Khazan C. "The 'Short Tests of Linguistic Skills' and Their Calibration." TESOL Quarterly, vol. 13, No. 2, June, 1979, pp. 185-208.

Wright and Mead (1976) have developed a computer program BICAL, based on the Rasch model, which produces estimates of item difficulties and ability scores, as well as a test of fit of individual items. Items that do not fit well are dropped and the remaining pool is recalibrated. The process is repeated until one has a homogeneous set of items that represent the construct being measured.

2. Sampling Considerations

In order to minimize the proportion of students that might have guessed the answers, we use those students who are relatively fluent in English for the English test, and those primarily Spanish-speaking for the Spanish test. Students with teachers' ratings of 5 and 6 (on a scale of 1 to 6) on English fluency are used in our calibration. We also limit our sample to those students who scored above a certain number, another way of ensuring that responses are close to students' abilities and guessing is minimal. As pointed out, no separate calibration for different age groups is necessary; the sample we have chosen is drawn across all age levels (8-13) to which the test is applicable.

3. Calibrating the English Test

We started out with a sample of 1000 students from English fluency categories 5 and 6, and performed Rasch analysis on the English test items using the BICAL program of Wright and Meade. Students with numerous missing scores were dropped. Analyses using different cut-off points (minimum and maximum acceptable scores) were attempted, to obtain optimal conditions to test the fit. Also separate Rasch analyses were carried out on the four subtests of Listening, Reading, Writing and Speaking. All the analyses were in general agreement as to the items that did not fit well.

Dropping some misfitting items resulted in a battery that measured the construct of English Proficiency fairly well. The final battery on which our calibration is based draws from all four subtests. The analyses also suggested areas of the test and cluster of items, which were subsequently dropped, that did not conceptually measure the construct being measured. In the following pages we briefly discuss those parts of the subtests from which items have been dropped and the reasons why. The reader should look at the items in the test (Table 1) while reading this section. The explanations are by no means exhaustive; on the contrary, they are merely the most simple and obvious. Table 1 gives a brief sketch of the test along with the correct responses where possible for quick reference.

4. Items Dropped from Calibration

English Listening, Part A: Items 1, 2 and 5.

Here the tester reads a word and the students check the word they think was said. These items are heavy on problematic sounds, and their mastery does not necessarily mean proficiency in the language or vice versa. Some testers themselves might have idiosyncrasies in pronouncing these words, making the students' task more difficult.

ENGLISH LISTENING, PART C. This part is loaded with factual questions that might have more to do with general knowledge than with knowledge of English.

ENGLISH READING, PART A: ITEM 1. This question is too easy, and discriminates poorly between people with good and poor English proficiency.

ENGLISH READING, PART C: ITEMS 13, 14 AND 15. Questions 13 and 15 deal with mathematical ability; fluency in English will be of very little help in solving the problem, e.g., counting each person mentioned in the paragraph or calculating the number of months elapsed. In question 14, identification of April with Spring is a culturally bound phenomenon and might not be a measure of English proficiency. Questions 13-14 do not fit the construct.

ENGLISH WRITING, PART A: ITEMS 1, 3 AND 5. Knowledge of difficult spelling is not an index of one's knowledge of English. Questions 1, 3 and 5 fall into a "somewhat difficult" category.

ENGLISH WRITING, PART B: ITEMS 1, 2 AND 3. These items are quite easy. It appears that students with lower ability are doing as well as or better than more advanced groups who might tend to become careless about easy items. These items might also be measuring some ability not confined to English proficiency. In any case, they do not fit well in the construct.

5. Calibrating the Spanish Test

For the Spanish test we choose a sample of 500 from the English proficiency category 1, i.e., primarily Spanish-speaking students. As with the English sample, this sample was drawn randomly from all age groups. Rasch analysis was performed using the BICAL program. Only a small number of items were found to be misfits in the construct of Spanish proficiency; they were dropped and the analysis was repeated until a good fit was obtained.

The dropped items are discussed below, followed by a brief layout of the Spanish test in Table 2 (Pp. 198-206).[3]

The items on which the Spanish test is calibrated are in Appendix C; the conversion table for raw score from these items to ability scores is in Appendix D.

6. Items Dropped from Calibration

SPANISH LISTENING, PART A: ITEMS 1, 2. Students who in general have more knowledge of Spanish seem to do poorly on these items; they do not, therefore, belong in the construct.

[3]For the complete test the reader is referred to the SHORT TESTS OF LINGUISTIC SKILLS (1976a, 1976b).

SPANISH LISTENING, PART C: ITEMS 12, 14. For item 12 a student's knowledge of arithmetic is more important than his/here knowledge of Spanish. Item 14 has a cultural bias and, therefore, does not fit in the construct of Spanish proficiency.

SPANISH READING, PART D: ITEM 19. This is a bad item; there is no clear right answer and knowledge of Spanish will not help.

SPANISH WRITING, PART A: ITEM 2. This is a tricky spelling item; knowledge of this word does not have much to do with knowledge of good Spanish.

Table 1

The English Test

English Listening, Part A

Students darken the circle in front of the word they hear said.

X	1.	○ yet	● jet	○ get
X	2.	○ pest	○ best	● vest
	3.	● bet	○ bait	○ bat
	4.	○ bus	○ bust	● buzz
X	5.	● ship	○ chip	○ zip

English Listening, Part B

Students write the words/phrases (shown) read to them.

6. Will	① ⑥
7. Jam	① ⑥
8. At the table	① ⑥
9. A spoonful of sugar	① ⑥
10. There is no such thing	① ⑥

Table 2

The Spanish Test

Spanish Listening, Part A (Escuchando español, parte A)
Los alumnos obscurecerán el círculo al frente de la palabra que han escuchado.

X	1.	○ aula	● jaula	○ jala
	2.	○ ola	● olla	○ joya
	3.	○ esta	○ esto	● está
	4.	○ pera	● pero	○ perro
	5.	● pila	○ pillo	○ piña

Spanish Listening, Part B (Escuchando español, parte B)
Los alumnos escribirán las palabras/frases (mostradas) que le han sido leídas.

6. Ovela	① ⑨
7. Guitarra	① ⑨
8. Traje de baño	① ⑨
9. La gallina come maíz	① ⑨
10. El niño juega en el parque	① ⑨

● indicates the correct response
X indicates item was dropped from calibration

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